

**Does HR Add Value?
Diverse Perspectives on Human Capital Management**

by

Jeffrey M. Eckman

B.S. Operations Technology
Northeastern University 2003

Submitted to the Alfred P. Sloan School of Management
in Partial Fulfillment of the Requirements for the Degree of

Master of Business Administration

at the

Massachusetts Institute of Technology

June 2006

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ABSTRACT

The human resources (HR) function has evolved significantly over the past several decades. It has grown in maturity and influence while simultaneously enduring great criticism from employees and managers. Meanwhile, environmental pressures have forced business leaders and academics to call for the elevation of HR to a level of strategic primacy. This thesis examines the relationship between organizational human capital and the professional HR function, looking at the history and current state of HR, perceptions of HR's efficacy, trends in innovative organizational design and leadership, and the future of human capital management. I explore these issues in the academic and popular literature, survey managers and experts in the field, and present an intra-industry study across several biotechnology firms.

Thesis Advisor: John Van Maanen

Title: Erwin H. Schell Professor of Organization Studies

For my wife, Erica,

I thank you for your patience, guidance, and your incessant support as I trudged through this thesis experience.

Your advice, editorial assistance, the gift of *your* master's thesis, and above all, your commitment to *us*, contributed to making this intense year-long experience at MIT Sloan a radiant milestone in our lives together.

With love and dedication,

—Jeffrey
May 15, 2006

ACKNOWLEDGEMENTS

I am indebted to my thesis advisor, John Van Maanen, who allowed me to find my own path in this process, while gently guiding me at the many stops along the way. Thank you, John, for your care and commitment throughout this project.

And of course, I am proud to recognize my beautiful family for the support and encouragement they provided all through the year.

I would also like to express my appreciation to the following group of individuals who offered invaluable direction and assistance: Diane Burton, Emilio Castilla, Steve Derezinski, Fred Foulkes, Pat Fuligni, Todd Gershkowitz, Alexandre Gomes, Cathy Kang, Chris Kelly, Eng Ching Kooi, Qifang Liu, Arlis McLean, Ken Morse, Fiona Murray, Stephen Sacca, Deborah Saks, Greg Schmergel, Shinji Shimizu, Jim Walker, Alice Heng Xu, Tony Yen and the entire MIT Sloan Fellows Program in Innovation and Global Leadership Class of 2006/Flex 2007.

Finally, to the anonymous group of professionals who carved out the time to speak with me about their experiences, I am heartily grateful. The insights garnered from my conversations with you not only made much of this thesis possible, but have also provided me with a whole new level of knowledge, understanding, and perspective that I could have never gained without your commitment to being part of this effort.

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Preface

After several years in varied management roles and some exposure to organizational curricula in my undergraduate days, I developed an interest in organizational behavior (OB). I was fascinated with the work of early writers and practitioners in organizational behavior, operations, and quality, including W. Edward Deming, Peter Drucker, Joseph Juran, Robert W. Johnson, among others. In my career, I have tried to put into practice the recommendations and perspectives from of these thought leaders. Moreover, through my experiences in various firms, I have seen both good and bad examples of organizational leadership and management in action. My assignments have allowed me to witness and be part of cultures that leveraged large portions of the workforce to develop quality products and fostered performance through highly effective teams, as well as those that left performance to a few stars, squandering most of the firm's human capital resources. I came to this research effort with the hope that through study of the management literature and practice, I would gain a new level of insight that I will be able to apply and build upon in my future endeavors.

This research project commenced with the intent of conducting a deep study in OB from the perspective of the individual—how the individual relates to and benefits from the organization, and how the organization benefits from the individual. I began to search for frameworks that would provide a vehicle for performing an intensive literature survey, and a companion field research project.

Through the course of my undergraduate work in OB, and my studies in strategy and operations at the MIT Sloan School of Management, I have taken a specific interest in human capital management, and have tried to thread together the theories and

frameworks that had been presented throughout the curricula. Attendance at a variety of MIT Sloan forums and talks, along with the Sloan Fellows Program's Seminar in Leadership, provided me opportunities to hear from a number of leading practitioners, many of whom talked of a need for firms to focus more on human capital management. I heard General Electric's former CEO Jack Welch speak of giving human resources (HR) a seat at the executive table, an oil services company executive who talked of his firm's cutting edge HR practices, and the director of a large biomedical concern who related the importance of the "elements of [human] behavior that create competitive advantage."

As my colleagues and I discussed the rhetoric on human capital and HR being offered by these business leaders, a critical question was typically posed: "But how are they *really* managing their companies? This soft stuff of HR doesn't speak to how the firm competes to deliver the numbers for Wall Street—for shareholder value!" As such, knowing I had committed to writing a thesis on OB, my first thought was to research the question of how HR could connect its efforts to the firm's bottom line, only to find that this had already been done (the literature on this is reviewed in Chapter Two). However, I still felt there was room for me to do some work in this area given the importance these leaders were placing on human capital, and the apparent skepticism about HR present among my colleagues. As I progressed through this study, I administered a formal survey of my colleagues in the Sloan Fellows Program as part of my research (the results of which are discussed in Chapter Four).

In addition to field research, including a study of the region's biotechnology cluster, this thesis presents a literature review including some of the aforementioned thought leaders, and is mixed with the perspective I have gained from my varied

experiences in managing people, working in teams, and leading teams in cross-functional and cross-business unit efforts. The concepts I focus on are those that have resonated the most with me, and that seem to map most clearly with my experiences in organizations. My experience in the Sloan Fellows Program in Innovation and Global Leadership has further exposed me to the work of Schein, Van Maanen, Pfeffer, Ulrich, Ancona, Argyris, and others who have given me additional frames to consider, additional tools for analysis, and opportunities for drawing out principles and models of management.

In working on this thesis, I sought to find answers to a number of questions in the areas of human capital management, and the changing role of the human resources (HR) function in managing human capital in today's corporation. These questions included: What is the current state of the art in HR management in the biotechnology/biomedical sector? How are firms using HR to attract, retain, and develop their human capital? Is human capital management recognized as a key enabler of firm success? Is HR contributing to human capital management? Does HR have a seat at the executive table? How are these issues being addressed within the biotechnology industry? What are the global views on this topic, what is specific to the US, and what are the perspectives from different regions of the world?

Ultimately, if I have achieved my goal, this thesis will provide some answers to these questions, and the results of this effort will hopefully be considered to add to the base of knowledge in this area—for others to utilize and build upon. While I can only hope that my efforts are considered of value to the field, I am unequivocally certain that this experience has provided me with a new set of tools that I can use to contribute to the growth of organizational capabilities and success in my career in management.

Chapter 1

Introduction

A decade ago, John Paul MacDuffie and Thomas A. Kochan warned that a lack of human resources investment on the part of US auto makers was creating a competitive disadvantage for the US auto industry relative to the rest of the world (MacDuffie and Kochan 1995). Today, for the first time in history, the U.S. auto industry is about to be ousted from world leadership - General Motors may soon lose the top market share spot to Toyota (Gallagher and Robinson 2005).

Today, we read both negative and positive characterizations of the human resources management function (HR) in the popular business press. Statements such as “It’s no wonder that we hate HR” appear along side claims that HR is “the corporate function with the greatest potential” (Hammonds 2005), and success stories like oil industry giant Schlumberger is touted as “a rare company that has turned its human resources department into a strategic asset rather than an employee-irritating nuisance” (Byrnes 2005).

We know a great deal about the value of human capital to organizations, and we see examples of failures and successes in the appropriation of human resources in many organizations. Near the point of bankruptcy in March 2006, General Motors’ inability to remain competitive forced the firm to announce the layoff of over 100,000 workers, and the sell off of its financial services business, GMAC (O’Dell 2006). Meanwhile, Southwest Airlines remains the most successful airline in history, due to the firm’s culture and the primacy of focus on human resources (Pfeffer and Sutton 2006). There have been models developed to empirically measure human resource effectiveness (Tsui

1984; Swanson 2001), and there is substantial research supporting the value of human resource management (HRM) in terms of effect on financial performance (Huselid et al 1997; Swanson 2001). We also know a good deal about what has worked in organizations. We have quantitative and qualitative accounts ranging from broad empirical studies to individual observations from organizational students and notable successful leaders.

This thesis examines the relationship between organizational human capital and the professional HR function, looking at the history and current state of HR, trends in innovative organizational design and leadership, and the future of human capital management. I explore these issues in the literature, by surveying managers and experts in the field, and with an intra-industry study.

In Chapter Two, I present a literature survey. The first section looks at the existing base of organizational knowledge from practitioners, including early thinkers and founders. I then present a quick survey of the academic research literature with a focus on organizational success factors. The following section looks at perspectives on the role of values in organizations. The Chapter concludes with a look at the literature on HR, a brief introduction to the biotechnology industry, and an overview of the concepts and main themes I have chosen to emphasize in this thesis.

Chapter Three presents a profile of the current state of the art in HR as assessed through interviews with academics, practice leaders, business managers and consultants. As noted, I carried out most of my interviews in the biotechnology area in Cambridge, Massachusetts.

In Chapter Four, I present the results of the questionnaire survey about HR that I administered to a global set of managers from the MIT the Sloan Fellows Class of 2006. The chapter provides an analysis of the data and a discussion of how the data relates to the findings from the literature and interviews.

In Chapter Five, I bring together the literature and field study findings and present my conclusions and recommendations for further action and research.

Chapter 2

Literature Review

In this chapter, I review select literature on human capital management in organizations from both the practitioner and academic perspective. I present a brief historical look at human resources (HR) as a functional entity, review some of the empirical literature relative to HR and firm performance, and profile the current state of thought and practice in strategic human resources management. Also in this chapter is a review and distillation of values and guiding principles on management derived from both practitioners and academics. The chapter includes an overview of the biotechnology industry. I conclude with a perspective on the main themes of this chapter.

Top Managers on the role of Human Resources Management

“...our business—*all* business—is people...”

— Robert Wood Johnson, Johnson & Johnson, 1949 (12)

“We hired you because of your individuality. Don’t hide it.”

— Colleen C. Barrett, President, Southwest Airlines (Medley 2005)

It shouldn’t be anything but common sense, but in much of what we read in business texts and the daily news is about the importance of collective human capital. But at the same time, we also read and hear more about a firm’s financial capital structure

than we do about a company's human capital. However, the dialogue on the primacy of the human component is growing. I present below perspectives from well recognized business leaders on the relevance of people in organizations. In the section that follows, I present similar human themes from the academic literature.

Practitioner Thought on Organizations

Much has been documented on what makes for a successful organization. There are myriad frameworks, matrices, dimensions, definitions, best practices, and models. However enlightening and useful these vast collections of ever-growing organizational literature are to management academics and practitioners, there are a few elegantly simple accounts of basic organizational function. The twentieth century work of Robert W. Johnson is presented below along with contemporary perspectives from several leading practitioners.

As told by former Johnson & Johnson (J&J) CEO James Burke, J&J's legendary leader Robert W. Johnson, was known for explaining organizational effectiveness as follows: "if you have sensible people who know each other, in a small enough group, somehow or other problems would get worked out" (Aguilar and Bhambri 1986).

Bringing together the motives of the individual and needs of the organization, Robert Wood Johnson said in talks to employees "each of us is interested in his own self-advancement; in earning money, in getting a better position, and in winning greater security. The surest way to achieve these advantages is to do our work in such a way that we make our whole organization stronger..." He then simply states, "effective work for the company... is also effective work for ourselves" (Johnson 1949, 3).

In his 1949 compilation of talks to workers, *Robert Johnson—Talks it Over*, the then J&J top manager covers other critical human capital subjects including organizational health and employee relations, community relations, compensation, leadership attributes, and organizational capabilities. In answering a hypothetical job applicant's question about the nature of the relationships between employers and workers, Johnson suggests the gauging of employee satisfaction as the method for determining organizational and management health:

Is there friendly teamwork, or does the superintendent snap at the foreman, who then bawls out someone else? What's the general attitude towards management? You will find some griping, of course, just as you will find it in any organization made up of human beings. But if the percentage of dissatisfied people is high, you may be sure that something is wrong with the company's management. On the other hand, if most workers... show confidence in management, you can be sure it gives everyone a square deal (Johnson 1949, 32).

The J&J Credo that Johnson penned (presented in its 1949 version in Appendix C) suggests that the interests of employees and the greater community trump the interests of shareholders. Expanding on these concepts, Johnson discussed “an enlightened condition of capitalism in which business realizes that it must earn its profits by performing all-out service for society.” He goes on to insist that “everyone should derive benefit from... sound business methods and policies.” On the topic of compensation, Johnson noted that “enlightened” management “pays good wages and seeks ways to increase them” (Johnson 1949, 143-144).

Finally, Johnson identified four qualities of management as (1) having organizational understanding, (2) leadership by securing willing cooperation, (3) effective fact-based decision-making ability, and (4) practical imagination allowing for

novel and proactive solutions (Johnson 1949). Johnson elaborates on several attributes of sound management including decentralized decision authority and a progressive notion of leadership. Effective decision making, and the authority granted to managers to make decisions, is cited by Johnson as a core process of how work gets done—along with a largely decentralized structure. On leadership qualities of management, Johnson states:

There was a time when people could be bossed; when threats of punishment or dismissal would drive men and women to work. That time, I'm glad to say, is gone. Today's manager must secure willing co-operation from people who work with him. He must be ahead as a leader; not behind, trying to drive (Johnson 1949, 158).

Through the latter half of the twentieth century, Johnson & Johnson prospered on the foundations of the principles discussed above. As the twenty-first century opened, we read of modern day practitioner accounts of human capital management effectiveness. In discussing organizational processes, former Honeywell International CEO Larry Bossidy, along with co-author Ram Charan, wrote in 2002 that “it’s the people of an organization who make judgments about how markets are changing, create strategies based on those judgments, and translate the strategies into operational realities” (Bossidy and Charan 2002, 141). The authors go on to suggest that human capital management should focus on building capabilities for future success, rather than using metrics of measurement based on past performance.

Robert Slater writes of former GE CEO Jack Welch’s assertions on the simplicity of organizational leadership: “Manage by creating a vision—and then make sure that your employees run with that vision” (Slater 1999, 33). In Jack Welch’s chapter on “People Management” in *Winning*, he calls for the “elevat[ion] of HR to a position of power and primacy” (2005, 98). Welch suggests that the HR executive be hierarchically

second only to the CEO—on par with or perhaps exceeding the importance of the CFO¹. Welch cites difficulties in quantifying HR's financial impact, and frequent classification of HR as largely administrative in function, as reasons for HR's historical lack of recognized strategic value. In discussing how HR was transformed at GE, Welch notes the importance of transparency in HR practices, and makes reference to HR professionals' skills in awareness of internal conflicts, knowledge of informal networks, and how to deal appropriately with these dynamics.

Southwest Airlines has been routinely held up as model example of progressive human capital management. In 2005, Southwest Airlines was \$1.5B in the black to the rest of the industry's \$33B loss over the last 4 years. Colleen C. Barrett, Southwest's President and Corporate Secretary, is responsible for culture preservation and indoctrination. She is the "Culture Committee" founder, responsible for values and moral philosophies, and the passing of the culture along through time. The proper terms "Servant Leader," "New Hires," "Customer Satisfaction," and "Southwest Family" appear in the literature on Southwest. Barrett claims that Southwest is "more about people than planes" (Medley 2005).

Former Manpower CEO Lance Secretan has written about the need to continue to move away from fear-based motivation practices in human resource management, toward motivation through inspiration and positive human interactions infused with truthfulness. Secretan defines leadership as "a serving relationship with others that inspires their growth and makes the world a better place" and suggests that good management need not

¹ Jack Welch claims that less than 1% of seminar audience members raise their hands in response to his question, "How many of you work at companies where the CEO treats the director of HR and the CFO with equal respect" (Welch 2005, 100).

be more complicated than building relationships based on truth. The author estimates that in the aggregate, 20 percent of the workforce is engaged in monitoring the activities of the remaining 80 percent—ensuring the 80 percent is telling the truth. He suggests that if the monitoring portion could be decreased by half (with more trust and truth in organizations and society), 10 percent of the workforce could then engage in more economically productive, positive and innovative activities. In making a clear financial case for the concept, the author cites a truthfulness initiative at Procter & Gamble (P&G) that Secretan saved the firm \$10M on a \$50M plant startup (Secretan 2005).

Lance Secretan's overt call for new attention to motivation provides us a fitting segue to a review of the academic literature. The motivation of humans in organizations is readily discussed in much of the management literature—it is an area that has been explored by a number of researchers over the years.

Academic Thought Leadership on Organizations

Academic institutions, by definition, are learning organizations. They foster learning, build knowledge, and in most cases, adjust themselves to the external environment. Ed Schein (2004) puts forward, “positive assumptions about human nature” as a characteristic of a learning culture, suggesting that “leaders must have faith in people and must believe that ultimately human nature is basically good.” Schein contrasts this

with negative assumptions about human nature, not unlike McGregor's (1960) Theory X (the cynical mistrust assumption²) (Schein 2004, 396-397).

In *The Modern Firm*, Stanford University Economist John D. Roberts' book on "the basic principles of the economics of organization," (Roberts, 2004, ix), the author suggests that motivation of human capital can be addressed by "shap[ing] the organization—the people, the architecture, the routines and processes, and the culture — to bring a closer alignment of interests between the organization and its members... thereby increas[ing] the efficiency of... choices." This could be seen as highly compatible with McGregor's Theory Y (1960).

In the chapter, "Man Waiting for Motivation," of Peters and Waterman's *In Search of Excellence*, the authors offer six paradoxes of the nature of human capital:

1. people are self-centered, and over-estimate what in reality are normally-distributed human capabilities; still, there seems to be a benefit from seeing the glass half-full—organizational "systems reinforce degrees of winning rather than degrees of losing"
2. the imaginative right-brain is as important as the rational left—"We reason by stories *at least* as often as with good data... Does it feel right?"
3. simplicity as a means for dealing with complexity, and experiential pattern matching
4. environmental versus intrinsic motivation
5. the need for actions to follow espoused utterances/values/principles/words

² Douglas McGregor's (1960) work defined assumptions about organizational members as either un-trustable, lazy, prone to shirking, and in need of command and control in order to perform (Theory X), or as creative, intrinsically motivated persons who enjoy working, and have potential to perform when provided with clear, common objectives (Theory Y).

6. people looking to institutions to provide meaning, and at the same time, desiring individual recognition
(Peters and Waterman 1982, 55-57)

Expanding on these observations, the authors discuss concepts of simplicity as a means for dealing with complexity, experienced patterns (e.g. “Have I seen this one before? In what context? What worked before?”) and positive reinforcement (“nudging good things onto the agenda instead of ripping things off the agenda”). On the topic of intrinsic motivation, they suggest a function of guiding principles in that “excellent companies are driven by just a few key values, and then give lots of space to employees to take initiatives in support of those values—finding their own paths, and so making the task and its outcome their own.” They also discuss security (e.g. in Japanese firms) as “rooted in solid cultural ground and shared meanings” rather than “security of position” (Peters and Waterman 1982, 77).

As additional observations of their study of successful firms, Peters and Waterman cite that “the stronger the culture and the more it was directed toward the marketplace, the less need was there for policy manuals, organization charts, or detailed procedures and rules. In these companies, people way down the line know what they are supposed to do in most situations because the handful of guiding values is crystal clear” (Peters and Waterman 1982, 76). The authors summarize “value content” with terms such as external, service, quality, people, and informality, and suggests simplicity as the primary correlative element of success (Peters and Waterman 1982).

In 1986, noted writer, consultant, and quality management guru W. Edwards Deming documented his “14 points” for the “transformation of Western management” in his book *Out of the Crisis*. The 14 suggestions were compiled based on quality efforts

and consulting work in Japan during the late 1940s and early 1950s. While the volume is largely written to address statistical manufacturing quality control, Deming did show how the “14 points” could be applied for service organizations. Deming’s qualitative principles are shown below:

1. “Establish constancy of purpose toward product [and/or] service” (i.e. firm-wide focus on stakeholders and/or mission)
2. “Adopt the new philosophy” (i.e. embrace change and focus on organizational learning)
3. “Cease dependence on inspection” (i.e. eliminate bureaucracy or inefficient administration)
4. “End the practice on awarding business on the basis of price” (i.e. build mutually beneficial and cooperative relationships with suppliers)
5. “Improve constantly and forever the system of production and service” (i.e. continuous improvement, build a learning organization — note that Deming’s assertion here is likely on the basis of reduced cost)
6. “Institute training on the job” (i.e. invest in and develop individuals in the organization)
7. “Institute leadership... find ways to translate the constancy of purpose to the individual employee” (i.e. reduce activities of control-based supervision, increase managers’ time and energy devoted to directly helping people, connect managers with customer feedback)
8. “Drive out fear.” (Deming talks a good deal about the negative economic impact of fear, and credits quality consultant William J. Latzko for originally suggesting the concept to him. Important issues of motivation are addressed here, including hierarchy reduction, full inclusion/engagement, etc).
9. “Break down barriers between departments” (i.e. increase use of teams, rotate staff, and improve horizontal and vertical communication)
10. “Eliminate slogans... imploring people to do better” (i.e. match rhetoric with action—management must show commitment by action—goes to motivation)
11. “Eliminate numerical goals for people... eliminate management by objective (MBO)... substitute leadership” (addresses motivation. Deming also writes here: “It is necessary for people to understand the purpose of the organization and how their jobs relate to the purpose of the organization.”)

12. “Remove barriers [to] pride in workmanship... [abolish] the annual or merit rating” (i.e. foster ownership and create incentive alignment)

13. “Encourage education and self-improvement for everyone... advances in competitive position will have their roots in knowledge” (i.e. build organizational capabilities by investing in the development of all organizational members)

14. “Create a structure in top management that will push every day on the above 13 points. Put everybody in the organization to work to accomplish the transformation. The transformation is everybody’s job.” (i.e. work toward implementation of the above recommendations in concert)
(Deming 1986)

Deming’s 14 principles were derived from experience, and were suggested in his book as a recipe for future success. Yet, 14 could be considered a dauntingly large number of maxims—perhaps too complex a set for managers and organizational members to easily grasp and retain. Collins and Porras (1994) in *Built to Last: Successful Habits of Visionary Companies*, cite a shorter set of features among their findings on research of 18 Fortune 500 firms that had survived, on average, 92 years, founded prior to 1950. The features of these long-lived organizations included alignment between core values and recruitment, development, succession. One of their findings was that organizational architecture trumped individual leader personalities. Moreover, successful chief leaders (CEOs) were mostly “home-grown.” Core values were deeply embedded in culture, rhetoric and action, and were embraced by all members. There was a balance between preserving the core and stimulating innovation, and the principles of autonomy, and highly iterative trial and error were also present. The authors also found that practices typically characterized in the 1990s as new and innovative were actually quite old.

As discussed in the previous section, Robert W. Johnson provided much simpler explanations and prescriptions for organizational success. John D. Roberts echoes

Johnson's earlier noted statement with the following reflection on the effectiveness of the academic institutions and universities:

“Get bright, curious people together, give them time and resources and minimal direction, let them communicate with other smart people who will both share thoughts and subject ideas to rigorous examination, and make sure that the people whose ideas are judged best are rewarded in a way they value” (Roberts 2004, 253-254).

In *The Human Equation*, Jeffrey Pfeffer writes about a number of key principles that he distilled based on his work in evaluating successful organizations. In addition to the principles of long term focus—along with the transformational HR elements of trust building, change as a normal state, and measurement and incentive design and alignment—Pfeffer distills the following seven practices:

1. Employment Security
 2. Selective hiring of new personnel
 3. Self managed teams and decentralization of decision making as the basic principles of organizational design.
 4. Comparatively high compensation contingent on organizational performance.
 5. Extensive training.
 6. Reduced status distinctions and barriers, including dress, language, office arrangements, and wage differences across levels.
 7. Extensive sharing of financial and performance information throughout the organization.
- (Pfeffer 1998, 64-70)

Pfeffer also cites a number of reasons for failure, including a focus on short term financial results, rewards based on purely financial results, the follow the crowd mentality, and a high value placed on analytic ‘knowing’ versus enlightened experience of ‘doing’ (i.e. the “ability to manage people”) (Pfeffer 1998).

In *The Modern Firm*, John D. Roberts documents features found among several successful large, disaggregated firms, that are effective when implemented holistically:

1. clarity in corporate strategy and policy
 2. structure as small decentralized, autonomic, and accountable units
 3. reduce hierarchical layers and central staff
 4. balance between performance incentives at individual, unit and whole firm levels
 5. training and development
 6. promoting horizontal linkage and communication to accompany traditional vertical communication
 7. improving performance measurement
- (Roberts 2004, 231-232, 241)

A common theme in the work of Roberts, Deming and others, is the notion of integrated, holistic implementation. Thomas Kochan's 1996 paper "What Works at Work," gave significant attention to the importance of the adoption of "a comprehensive system" of integrated practices, rather than implementation of individual, isolated policies or distinct initiatives (Kochan et al 1996). And Kochan further remarked on extra-organizational "systemic criticality," claiming that "solving today's... workplace problems lies beyond the capabilities of any single firm... [requiring] coordinated efforts among all key actors and institutions affecting employment policies and practices" (Ulrich et al, ed. 1997).

In studying "innovative" human capital management practices, MIT Sloan's Kochan and colleagues from the Haas School at UC Berkeley, Columbia, and the University of Wisconsin found consistent evidence of business performance from the holistic/systemic implementation of flexibility in the design of work, decentralization of tasks and responsibilities, and policies that enhance worker participation (i.e. motivation). And in "Managing Transformational Change: The Role of Human Resource Professionals," Kochan and Dyer suggest the additional systemic constraint of the firm's network—the degree to which the firm's supply chain and customers, partners, etc have adopted innovative practices (Kochan and Dyer 1992).

There are other thought leaders who have found the holistic implementation of a set of maxims to be common in studies of successful corporations. Thomas Peters and Robert Waterman created the McKinsey 7-S Framework defining management through the connected variables of strategy, structure, systems, style, staff, skills, and shared values. In 1982 they published their eight attributes of successful corporations as:

1. A bias for action
 2. Close to the customer (i.e. external environment connectivity)
 3. Autonomy and entrepreneurship
 4. Productivity through people
 5. Hands-on, value-driven
 6. Stick to the knitting (focus on core organizational objective/business)
 7. Simple form, lean staff
 8. Simultaneous loose-tight properties (e.g. balancing centralization and decentralization)
- (Peters and Waterman 1982)

There are a number of common threads in the analyses of organizational success factors presented throughout this section. I have distilled the following 10 architectural and action guiding principles from the reviewed literature:

1. Simple, clear and aligned mission and guiding values—alignment of action and rhetoric
2. Small decentralized—performance-accountable units
3. Selecting human capital for value fit and heterogeneity, and developing and educating all organizational members (i.e. building organizational capabilities by investing in the development of all organizational members)
4. Balancing between performance incentives at individual, unit and whole firm levels, with comparatively less weight on individual incentives
5. Designing for mutual benefit in internal and external relationships
6. Minimal hierarchy, small centralized staff, leveled status distinctions
7. Motivation through common objective systemic design and not motivation by control and fear (i.e. favoring Theory Y over Theory X)
8. Vertical and horizontal linkages, communications, measurements, and reporting practices
9. High degree of external environment connectivity
10. Continuous simplification and holistic integration in action on all above items

These 10 principles are a rough cut at synthesizing the work of the aforementioned researchers. Each point addresses a method or principle in dealing with human capital within organizations (regardless of size), with the intent of maximizing the collective human capital contribution. I would also suggest that each of these points has a place in the human resources function, in terms of helping to design the organizational architecture, consulting to executives and line managers, design of incentives, individual and collective, and the talent selection and development of employees. It is clear that HR can and does play a role in implementing these principles in organizations.

Lastly, I attempted to organize these principles in a somewhat sequential order, albeit, they are not intended to be digested as a prescriptive process. Still, the presence of “simple, clear and aligned mission and guiding values” appears first as it serves as a central and foundational base to which human capital can be anchored to in acting within the organization.

Values in Organizations

“So much of excellence in performance has to do with people being motivated by compelling, simple—even beautiful—values.”

— John Van Maanen from “Style as Theory” 1995

val·ues:

the accepted principles or standards of an individual or a group

prin·ci·ples:

1. important underlying law[s] or assumption[s] required in a system of thought
2. standard[s] of moral or ethical decision-making

(Encarta 1999)

In *Winning*, Jack Welch discusses perspectives on his career following several years of question and answer sessions as part of his recent book tours. He touches on values, and delivers a variety of prescriptions for individual and firm success. Most relevant, the former General Electric (GE) CEO defines values as the description of “real behaviors” in support of an organization’s objectives. His discussion of values is paired with the notion of the organizational mission³, where values and the mission are “mutually reinforcing” (Welch 2005, 21).

Johnson & Johnson’s (J&J) legendary “Credo,” the firm’s long-standing statement of what Collins and Porras call the “codif[ication of] the J&J ideology” (1994, 58) seems to capture both the firm’s mission, and what Welch (2005) defines as values. Written as a detailed list of guiding principles, organized under five responsibilities, (the first of which calls out the firm’s healthcare market mission), the document offers the reader (employees and the general public) a detailed list of values to guide behavior in support of missions to serve a number of internal and external constituents (e.g. customers, management, the community, the supply chain network, stakeholders, shareholders, etc) (Johnson 1949, 173-174).

³ Welch (2005) defines the mission as “announc[ing] exactly where you are going” and adds to the concept by noting that the mission statement addresses the question: “How do we intend to win in this business?”

Of Collins and Porras' studies in *Built to Last*, Schein writes, "The constancy of a core set of deep beliefs, values, and assumptions is also one of the keys to the longevity of... successful organizations" (Schein 2004, 389). Jack Welch claims a "disconnect between... mission and values" and a lack of "explicitly broadcast" (2005, 23) values to guide behavior, as key contributors to the fall of Arthur Anderson and Enron (Welch 2005).

We could simplistically assume that the founders and leaders of long-time successful organizations, like Robert W. Johnson, took their knowledge from a variety of sources or experiences and translated their knowledge into action through the process of communicating the content of that knowledge (e.g. principles, values) to others. Schein addresses this in discussing organizational founders: "Founders not only choose the basic mission and the environmental context in which the new group will operate, but they choose the group members and bias the original responses that the group makes in its efforts to succeed in its environment and to integrate itself." Schein outlines four steps in new business organization formation. Initially, one (or more) individual creates new ideas. Second, the founder or founders bring in others to create a core group that shares the vision or goal of founder(s), who all believe in the ideas, and find it worthy of risk and investment of energy. Third, the group begins to act as a team to create the organization, raising capital, designing products, and acquiring assets or tools. Finally, the group grows, and a common history is built. The group experiences shared learning events, and through longevity builds assumptions about itself and its environment (Schein 2004, 226).

Schein's ultimate findings on this topic are trifold. First, founders propose initial answers to new groups' questions on operating internally, and operating with regard to the environment. Second, founders "tend to have well-articulated theories of their own about how groups should work." Third, founders "tend to select... others who they sense will think like them" (Schein 2004, 270).

Many firms select new members based on value fit. Likewise, some firms, like J&J, evaluate acquisitions based on value fit. And there are prospective employees who select employers based on this same criteria of value fit. Personnel and human resources departments have long held the responsibility for recruitment and selection of new employees, albeit with the input of line and hiring managers. But the role of human resources extends well beyond the recruitment function. In the next section, I present an overview of the human resources as an organizational entity.

The Human Resources Entity

So I asked my masseur, "Which profession seems to have the worst backs—the most tension?" He replied, "HR."

— Gretchen Weismann, MIT Sloan School of Management PhD candidate (2005)

Bureaucracy grows within a company by means of the administrative activity it engenders.

— Henry Jacoby, 1973 (81)

In this section, I present a brief history of the human resources profession, profile the contemporary features of the function, along with some insights from the literature on the outlook for the future.

HR: The Early 1900s Through Today

The personnel function in the U.S. had its origins in the 1930s born out of the industrial relations and labor union growth environment, where the professional focus was on functioning as an arbiter of worker and ownership interests. Until the 1960s, industrial relations specialists primarily negotiated with unions, and worked with management on how to structure employee activities and policies. With the growth of white collar employment for the two decades following 1960 came the need for personnel professionals to focus more on the management of recruitment, retention, compensation, and many of the activities we have come to understand as the work of human resources (HR) (Ulrich and Brockbank 2005; Kochan and Barocci 1985). Yet the HR function remained largely administrative, dealing with recruitment and policy (Sisson and Storey 2000) and administrative tasks continued to grow with the passage of regulatory legislation governing employers, requiring firms to devote resources to compliance (Kochan and Barocci 1985). A modern example growth in administrative tasks is the broad proliferation of new activities dedicated to Sarbanes-Oxley act compliance, which is impacting many firm functions in addition to HR.

Starting in the 1970s, the decline of labor unions, combined with increased global competitive pressures, forced the nature of industrial relations and human resources

functions to change and diverge. Industrial relations remained active in larger, older firms and focused on union relations and collective bargaining, and younger technology firms founded in the 1960s developed “highly innovative” human resource functions to meet the needs of both unionized and non-unionized environments (Kochan and Barocci 1985). Strategic human resources management (SHRM) began to take shape in the mid-1980s (Tsui and Milkovich 1987). John Storey defines SHRM as:

A distinctive approach to employment management which seeks to achieve competitive advantage through the strategic deployment of a highly committed and capable workforce using an array of cultural, structural and personnel techniques (Storey 2001, 6).

In general, the difference between HR and SHRM is between administrative-centric HR activities and non-administrative SHRM activities, respectively.

In the 1990s, driven by changes in the external environment and related challenges including globalization, calls for the building of organizational capabilities, meeting the increased pace of change, and fostering technological innovation, were added to the existing base of HR functions (Ulrich 1997). Additionally, popular management trends such as total quality management (TQM), high-commitment human resources management (HRM), and “open-book management” (OBM) were part of a series of management efforts that increasingly focused on human capital as a source of competitive advantage (Baron and Kreps 1999).

A simple framework provided by Kochan and Barocci (1985, 104), classifies current human resource functions and maps their relevance to life cycle stages of a firm. As shown in Table 2-1, the functions include: Recruitment, Compensation, Training and Development, and Employee Relations. The life-stages include Start-up, Growth,

Maturity, and Decline.

Table 2-1: Critical HR activities at different organizational or business unit stages.

Human resource functions	Life cycle stages			
	Start-up	Growth	Maturity	Decline
Recruitment, selection and staffing	Attract best technical/professional talent	Recruit adequate numbers and mix of qualified workers. Management succession planning. Manage rapid internal labor market movements	Encourage sufficient turnover to minimize layoffs and provide new openings. Encourage mobility as re-organizations shift jobs around	Plan and implement workforce reductions and allocation
Compensation and benefits	Meet or exceed labor market rates to attract needed talent	Meet external market but consider internal equity effects. Establish formal compensation structures	Control compensation	Tighter cost control
Employee training and development	Define future skill requirements and begin establishing career ladders	Mold effective management team through management development and organizational development	Maintain flexibility and skills of an ageing workforce	Implement retraining and career counseling services
Labor/employee relations	Set basic employee relations philosophy and organization	Maintain labor peace and employee motivation and morale	Control labor costs and maintain labor peace. Improve productivity	Maintain peace

(Kochan and Barocci 1985, 104).

The Future of HR

Thought leaders in both the academic and practitioner arenas have examined current HR practices and have called for changes in functions, activities, and strategies. In his 1998 Harvard Business Review piece “A New Mandate for Human Resources,” Dave Ulrich has suggested that HR could be the firm’s new leader in building organizational capabilities. He suggests that HR functions should be tied to results. This, in his view, would help destroy the commonly-held stereotype of HR as “incompetent value-sapping support staff.” Ulrich cited four imperatives for HR:

- (1) partnering with the executive team in strategy execution by
 - a) defining organizational architecture/framework,
 - b) conducting organizational audits,

- c) improving organizational design, and
 - d) investing in HR capabilities to tie activities to business outcomes;
- (2) capitalize on and extend administrative expertise,
 - (3) advocate for all employees, and
 - (4) build organizational capacity for change
- (Ulrich 1998).

Ulrich also suggests four ways that senior management can change how HR is perceived in organizations. First, communicate the relevance of the “soft stuff” of human capital management. Second, define clear deliverables for HR and hold HR accountable for results. Third, invest in HR innovation by external analysis, research, and lastly, develop and/or recruit the right HR experts (Ulrich 1998).

In *Strategic Human Resources: Frameworks for General Managers*, Baron and Kreps (1999, 506-507) outline the tasks of human resources as falling under three categories:

- 1. the formulation of HR strategy and general policies
- 2. the implementation of strategy and policies
- 3. record keeping, compliance, and personnel service delivery

The authors suggest that HR departments should split off the third administrative category and either classify the functions internally as administrative “service center” activities and move those functions elsewhere in the organization or outsource these “mundane” activities (Baron and Kreps 1999).

In *What Works at Work*, Kochan et al (1996) observed that workplace innovations are impeded by a variety of factors (systemic inertia, conflicting internal interests) but most notably the constraint of short-term interests by financial agents, in response to U.S. financial markets and institutions:

“...workplace innovations must compete with alternative strategies for boosting short-run performance not only among managers with competing preferences and interests within the firm, but with those who monitor firm performance for shareholders and large institutional investors.”
(Kochan et al 1996, 34)

The authors follow this observation with a note that in the U.S., “human resource managers tend to be among the lowest paid and least influential of corporate executives”
(Kochan et al 1996).

The literature suggests that HR can play a role in helping to bridge internal conflicts required to bring about a significant change in how human capital is appropriated within organizations:

The underlying challenge facing human resources professionals in the coming years lies in finding the right balance between building coalitions with other professionals who share responsibility and influence over employment relations and deepening efforts to make human resources a strategic asset for their firms (Kochan 1997, 128).

Further, internal conflicts are also characterized in the literature as taking place between sometime closed, distinct groups that frequently maintain their own closed networks. Schein’s (2004) Three Organizational Subcultures is a useful framework to understand these internal conflicts. According to Schein, large organizations are frequently marked by three distinct managerial subcultures. These are:

1. The Operator Culture - made up of employees and line managers who are responsible for carrying out the organization’s work. They act on local knowledge and do so with commitment. They value trust, work in teams and must adapt to a dynamic environment.

2. The Engineering Culture - made up of designers, engineers, researchers who create products and processes. This subculture values simplicity, elegant utility, mastery of nature, and prefer machines and processes to fallible humans.

3. The Executive culture - made up of top level executive managers for whom financial concerns are paramount. To them, managing equals controlling, the environment is seen as adversarial, they assume subordinates are both inferior and untrustworthy. They often do not value “whole people” as much as the “activities that... people are contracted for (Schein 2004, 197-199).

The relevance of HR in Schein’s typology could be characterized as HR playing a role that joins these three cultures such that they become more aware of each others’ interests, understand each other better, and can build cohesive alignment.

In *Execution*, authors Bossidy and Charan (2002, 166-167) suggest transforming HR as one of the building blocks of a “robust people process:”

“...its role has to change radically. HR has to be integrated into the business processes. It has to be linked to strategy and operations, and to the assessments that the line people ultimately make about people. In this new role, HR becomes recruitment-oriented and a far more powerful force for advancing the organization than it was in its typical staff function.”

The other three elements of Bossidy and Charan’s framework include linking people to strategy and operations, developing depth in the leadership talent pipeline, and dealing appropriately with non-performers.

In *The HR Value Proposition*, Ulrich and Brockbank (2005) deliver a contextualized look at HR and offer a range of general to highly specific tools for analysis, recommendations for changing HR, and HR organization design. Of particular note to HR as an organizational entity, they frame a discussion around three “generic”

HR organizational structures along a centralized to decentralized dimension. These structures are: functional organization (centralized), shared services, and embedded (decentralized). The authors also classify HR into two activity segments: at one end, transactional and administrative, and on the other, transformational and strategic.

In discussing transformational and strategic HR, Ulrich and Brockbank discuss four sources of HR delivery. First is at the corporate level, addressing issues of culture, values, institutionalizing principles, and HR professional development. Here, maintaining cohesion and cooperation among all executives of the firm sources are noted along with building organizational capabilities to execute corporate strategies. Second, is the embedded level where HR is actively involved with business strategy, and other non-administrative tasks. The third source is centers of expertise where HR as internal consultants provide all constituents with advice and counsel in the areas where HR has typically held the expertise. Finally, at the line manager level, HR is a partner, with managers as the final decision makers (Ulrich and Brockbank 2005, 178-196).

In the August 2005 issue of *Fast Company*, Hammonds piece “Why We Hate HR” referred to Ulrich’s work, and offered five points of his own as to the roles the new HR should play:

1. Match rhetoric with action
 2. Measure HR performance relative to business performance/value
 3. Get the right people in HR (replace old with new)
 4. Serve the business by advancing both organizational and individual performance.
 5. Create value for a) employees by fostering commitment b) managers by creating execution capability c) customers by relationship building, and d) investors by creating confidence in future firm value.
- (Hammonds 2005)

Barney and Wright (1998) and Wright et al (2001) suggested future HR function changes based on a Resource-Based View of the Firm (RBV) Barney and Wright wrote that “HR practices play an important role in developing the human assets that provide competitive advantage” (Barney and Wright 1998). They suggest a systems approach to organizing HR. The authors cite numerous bases for human capital as a source of competitive advantage with regard to firm-specific skills, teams over individuals, and HR systems moreso than HR practices. In 2001, Patrick Wright took the step of substituting the term “people” for HR, and suggested that the field of strategic human resource management could benefit theoretically and empirically from additional RBV-based research (Barney and Wright 1998; Wright et al 2001).

Strategic Human Resource Management and Firm Performance

“artful...forms are seen by many... in the field to interfere with the presentation of what is actually there in a given social world” (Van Maanen 1995).

But research indicates that successful management is largely right-brained: “key managerial processes... seem to be more relational and holistic than ordered and sequential... more intuitive than intellectual; they seem to be most characteristic of right-hemispheric activity” (Mintzberg 1976).

It has been said that managing is an art. In fine art, creators provide us with their representations of their thoughts and interpretations, which other artists then in turn use for inspiration. Organizational practitioners, too, give us their impressions of their

experience in testimonials, interviews, columns, and books. Thus, most of the popular literature on management is either self-reflective, or observational, or both. Many students of management read what accomplished practitioners have written and attempt to apply the wisdom offered.

CEOs like Jack Welch, Larry Bossidy and others who have written on management have records to show for their success—they have presided over significant bottom line results. It is likely that readers of these practitioners triangulate the legacy of financial results, the successful leader-authors, and what the leaders have to say about how they achieved their results and make a causal or correlative connection. Yet, there is a perception that when less senior leaders (e.g. senior Vice Presidents of HR) in organizations attempt to make similar claims about what contributes to success, their assertions are met with a skepticism that asks them to explicitly prove the efficacy of policies. Similarly, over the years there have been calls for a connection of the actions of HR to bottom-line impact. Thus, over the years, a body of literature based on empirical study has developed to provide HR managers with the tools to provide this proof.

In 1984, Anne S. Tsui suggested a framework for evaluating the effectiveness of the human resources function, at a time when “personnel departments [were] growing in stature and influence” and lacked “satisfactory theory or methodology for assessing their effectiveness” (Tsui 1984). Tsui’s model proposed a baseline setting of expectations on the part of constituents of the personnel department (i.e. all functions in a firm), as well as measuring performance along the dimensions of measurement criteria, and the domain of the activities of HR. The model requires the use of multiple constituencies and a set of

metrics as the measures of effectiveness. A contemporary application of this model could be the combined mix of employee surveys and metrics such as turnover and productivity.

In answering a call for more empirical research to prove HR's impact on firm performance, Mark Huselid in 1995 carried out a study of approximately 1000 firms to test HR efficacy. The research showed that the implementation of systemic strategic HR principles (noted in the study as "High Performance Work Practices") did yield measurable benefits to short- and long-term financial performance.

More recently, human resource researcher Richard Swanson discussed cost and benefit calculations regarding HR initiatives. In his 2001 book *Assessing the Financial Benefits of Human Resource Development*, Swanson writes that a "cost-only perspective yields very different decisions than the perspective of assessing the financial benefits to be gained" (Swanson 2001, 22). The author outlines three HR financial analysis methods: forecasting, actual results, and approximated results. Swanson also offers tools to the human resource manager including HR financial analysis formulae, worksheets, and suggestions for how human resource managers can be most successful in presenting proposals and reports to management (Swanson 2001).

Using the tools and frameworks from the book, Swanson documents financial benefit of human resource investment in a number of case studies. In one case, a return of 1100% was shown on a training program investment in a healthcare firm. Another example presented a 7:1 ROI on an HR-led design of a project management information system at a consulting organization. While significant return is documented in these cases, each of Swanson's methods appear limited in their application to the measurement of programs, distinct projects, or otherwise closed systems, where a finite and stable set

of variables is in place. The author maintains actual financial measurement is “easy,” while admitting that these financial assessment techniques require the identification of a specific measurable performance objective (e.g. market share gain), and a highly organized execution effort. Of course, Swanson notes the somewhat common sense observation that “ill-proposed and poorly implemented,” human resource initiatives may capture costs, “but the performance value may not appear” (Swanson 2001, 117).

Having reviewed some of the literature on measuring the effectiveness of HR on firm performance, it seems there are questions about the relevance and the efficacy of the measurement strategies and methods. Before exploring this and other topics with practitioners in the Chapter Three industry study, I provide a brief overview of biotechnology.

An Overview of Biotechnology

The Greater Boston area is home to a variety of industries. These include financial services, nanotechnology, biotechnology, health care, hospitals, and educational institutions, to name a few. Given the proximity of numerous biotechnology firms to the MIT campus, along with the Institute’s vibrant connection to the biotechnology industry community, I considered an intra-industry study in that area, figuring this would be convenient, if only in location. I was well aware of the Kendall Square biotechnology cluster, including ongoing studies by MIT Sloan’s Professor Tom Allen on informal networks in the cluster. I also had relationships with professionals and scientists in the

industry from previous experience⁴ in biotech, and saw additional resources in MIT's Entrepreneurship Center, and Sloan faculty who were actively engaged with the cluster. I decided then to focus on a study of biotechnology cluster firms.

In the literature that was focused on the biotechnology industry, several references were found to be helpful, particularly Cynthia Robbins-Roth's *From Alchemy to IPO: The Business of Biotechnology* (Robbins-Roth 2000), and Monica Higgins' *Career Imprinting: Creating Leaders Across an Industry* (Higgins 2005). These two contemporary resources provided historical perspectives on industry organization and the legacy of human capital management in biotechnology, respectively.

Biotechnology was borne out of massive US government R&D investment in the 1970s focused on finding a cure for cancer. In the 1980s, the field emerged as an industry based on new science, full of innovative organizational forms and management approaches, and some "creative financing ideas" (Robbins-Roth 2000, 7-9). Cynthia Robbins-Roth classifies a few important firms in biotechnology as "first generation," defining them as firms having initial public offerings between the years 1980 and 1986. In the text, Genentech was cited as the pioneering firm. Also included in this first generation category were Amgen, Biogen (now Biogen-Idec), Genzyme, and Genetics Institute (eventually acquired by Wyeth).

The essential science of biotechnology was originally based on immunotherapy, which addresses immune system responses to tumors and viral infection. Immunotherapy work in the early 1980s created significant demand for human proteins for use in

⁴ My first professional assignment out of the undergraduate setting was with Genetics Institute, Inc., where I worked from 1991 to 1995, before the firm became a unit of Wyeth Pharmaceuticals.

research. Up until 1980, proteins had to be organically cultivated. As such, supplies for research efforts in immunotherapy were limited due to laborious methods and tendencies toward contamination. However, advances in genetic engineering eventually made possible the cloning or “manufacture” of human proteins such that researchers could be provided with the high quantities of proteins they needed. Perhaps more importantly, biotechnology came into existence as a result of the development of these proteins as pharmaceuticals, (in the form of manufactured insulin and other products) (Robbins-Roth 2000).

About twenty biotechnology (or ‘biotech’) firms were formed in the early- to mid-1980s. Later in the decade, venture capital firms began recruiting senior, experienced professional managers from big pharmaceutical firms to lead a growing number of biotech startups. However, the progressive and comparatively informal cultures of the biotech firms were, for the most part, not a great fit for some of these older pharmaceutical executives, who were much less hands-on and innovative than their younger, entrepreneurial counterparts. However, there appear to have been some. Robbins-Roth writes, “To understand the environment within entrepreneurial companies, whether high-tech, biotech, or no-tech at all, look to the leaders. Their attitude is what shapes the corporate culture” (Robbins-Roth 2000, pp18-19).

In researching her 2005 book *Career Imprints*, Monica Higgins interviewed Gabe Schmergel (Genetics Institute CEO, 1981-1997), Henri Termeer and Elliott Hillback (CEO and SVP at Genzyme, respectively), and Jim Tobin (CEO of Boston Scientific, former CEO of Biogen). They, among others, were all originally from the large pharmaceutical firm Baxter. Higgins’ account of Baxter’s human capital development

process (project assignments, transition to general management, job rotation, and “final polish”) includes what she characterizes as necessary “critical challenge moments” rooted in “crisis response,” characteristic when dealing with highly uncertain environments.

Today, the biotechnology industry comprises many hundreds of firms world-wide. In Cambridge, Massachusetts alone, there are hundreds of biotech companies of varying sizes. The Massachusetts Biotechnology Council (MBC) classifies biotechnology firms into three size and activity categories:

“As a biotechnology company grows from a small start-up to a large manufacturer, human resources needs change. Three milestones of growth are:

A small company of 1-50 employees is involved in research and development.
A mid-size company of 51-300 employees is testing products that progress through clinical trials, following strict FDA regulations.
A large company of over 300 employees has received FDA approvals and is manufacturing products.”

Source: <http://www.massbio.org/directory/careers/>

Conclusion

In this chapter, I presented an array of perspectives on human capital management and organizations from noted practitioners and academics. I offered perspectives on the role of values in organizations, outlined select literature on the human resources function, and provided an overview of the biotechnology industry. I now offer some of my perspectives on the literature.

I first presented key insights from Johnson & Johnson’s Robert W. Johnson. A significant element to J&J’s organizational design is the degree of decentralization. Alfred P. Sloan was obsessed with the paradox of balancing centralization and decentralization at GM (Jacoby 1973, 75-76). The compilation of organizational maxims

presented include the common theme of establishing decentralized, autonomous business units. Additionally, the notion of positive human relationship building is prevalent in the literature and is highlighted in my 10-point distillation of what makes an organization effective.

I close this chapter with a final human perspective from the literature. There are growing number of references in strategy and organizational literature to bonding, embracing and other terms of intimacy, in contrast with adversarial posturing or rivalry. “The new mindset focuses on partnering with customers and complementors with the ultimate aim of captivating rather than capturing them” (Hax and Wilde 2001).

Alfred P. Sloan Professor of Management Arnaldo Hax, a key figure in strategy and operations research, has talked of “Decommoditizing [the] customer” regarding customer segmentation and general customer posture on the part of firm strategy (Hax 2001). In *The Delta Project*, the authors write “the commodity mentality assumes that certain products cannot possibly be differentiated and, therefore, the only meaningful way to compete in those cases is to achieve a low-cost structure” (Hax and Wilde 2001, 57). They go on to claim that too much attention is then given to trying to beat competitors, the customer is given less attention, and opportunities for creatively “captivating” customers or expanding the market are diminished or lost (Hax and Wilde 2001, 49-62). We can apply this same granular commoditization principle looking inward in the firm, at each organizational member. If we look at individual organizational members as possessing truly differentiated skill sets, personalities, and capitalize on the individual’s creativity in a creative manner, we help to address the building of

organizational capabilities. We are then positioned to “compete for profits” rather than be “doomed to compete for low costs” (Hax and Wilde 2001, 62).

In a discussion on Michel Crozier’s work from 1964, Henry Jacoby offered that “the most productive organization is... the one that is most alive; that is to say the one in which the subordinates are encouraged to participate in the formation of decisions which they have to implement” (Jacoby 1976, 203).

Kochan and colleagues have claimed, “the future of management... is too important to leave to managers alone!” (Kochan et al 2002, 22) And to borrow again from Arnaldo Hax, known for saying that “sales are too important to be left to the sales force” (Hax 2001), I offer that “human capital management is too important to be left to human resources,” Of course, HR can and should certainly play a role, as should salespeople in any organization where effective salespeople exist. The point is, that there is a fair amount of agreement that HR needs to be more integrated throughout the firm. I now move to consider how HR is viewed within the relatively new industry of biotechnology.

Chapter 3

HR in Biotech—Interview Findings

My interest in this chapter is how (and if) biotechnology firms are using HR to build organizational capabilities, and how they are structuring their strategic HR functions. I begin with a review of my interview methods and move on to summarize the results of my conversations with knowledgeable HR observers and practitioners in the Cambridge biotechnology cluster.

Methodology

I began my study by interviewing HR professionals from a wide range of industries. I also interviewed several consultants to the HR departments, and others who were familiar with human capital management practices in the biotechnology industry. All provided a great deal of guidance for what questions to ask, some of these which I include in this thesis and some must wait for future work.

I attained my data through open-ended interviews with individuals inside and outside of the biotechnology industry. Twenty persons were interviewed. The interviews were carried out between January and April 2006. Interviews were recorded by note taking, either typed or by handwritten notes, while in the interview session. Interviews were conducted in person, except for seven phone interviews, where distance or time constraints demanded. Each interview ranged from 30 to 90 minutes, averaging about an hour. In two cases, I conducted follow-up interviews. Of the twenty practitioner interviews, nine were conducted with those who currently work in, or have worked for,

biotechnology and/or biomedical firms, and five interviews were with those involved with providing services to the biotechnology and/or biomedical industry. Fifteen interview subjects were human capital management/HR professionals. Five subjects were chief-level executives (CEO, CFO, CPO [Chief People Officer], or CHRO [Chief Human Resources Officer]), and seven were executive vice presidents (EVP) (n=3) or vice presidents (VP) level (n=4).

Interviews were semi-structured, with open-ended questioning organized roughly as follows: historical perspectives on the HR profession; HR and the role of values, principles, organizational maxims, and culture; the core activities and organization of the HR function; measuring HR effectiveness; executive and firm-level presence, and the HR brand; where HR talent (professionals and executives) is coming from today; and key challenges and other insights.

To get a close-up view of current HR practices, I selected two large firms within the biotechnology cluster. I also added to my perspective, two peripheral firms in the industry outside the cluster. To offset the high-level only internal perspective, I broadened my research base to include external leaders from firms that observed and/or interacted with firms within the cluster. These included interviews with 3 supplier/consultants, as well as 2 general practitioners in smaller operations. Table 3-1 presents a summary of sample characteristics.

Figure 3-1: Interview Sample Characteristics

Function	Industry/Organizational Background	
	General (n=13)	Biotech (n=7)
Executive	1	2
HR Professional	7	5
HR Supplier, Consultant (including retained search)	3	0
Small Firm HR Professional	2	0

Interview Findings

In this section, I provide the results of interviews. Of the 20 people I interviewed for this study, 13 were general practitioners and 7 were practitioners within biotechnology.

I organized my findings along several dimensions: the interviewee's career/organizational experience (e.g. general or biotech), and the seven categories noted previously. Figure 3-1 illustrates this research design.

Figure 3-2: Interview Findings Organization Structure

Categories	Career/Organizational Background	
	General (n=13)	Biotech (n=7)
1. Historical Perspective on the Profession		
2. Values, Principles, Org. Maxims, and Culture		
3. Core Activities and Org. of the HR Function		
4. Measuring HR Effectiveness		
5. Exec. and Firm-level Presence, Support & the HR Brand		
6. Talent Sourcing of HR Professionals and Executives		
7. Key Challenges and Other Insights		

My interview findings are presented below in two sections: first from the general practitioner perspective, and second, findings from interviews with biotechnology

practitioners. In each section, I present findings organized by the above seven categories. I conclude the chapter with a summary analysis.

General HR Practitioner Interviews

Historical Perspective on the Profession

HR professionals described the “professionalization” of the HR function that has evolved from the 1980s. One in particular described the transition from the personnel department to the development of the professional human resources function that took place in the 1980s. Referring to the transition from personnel to HR, a corporate VP of HR noted that “personnel was transactional... HR is strategic.” A career compensation expert suggested the transition to HR in the 1980s and 1990s was driven largely by the popularity of Michael Porter’s Five Forces strategy framework. He indicated that this was when Strategic Human Resources Management (SHRM) began to take shape.

One VP of HR noted that before the 1980s, personnel departments and professionals were mostly made up of people who came from traditional administrative or secretarial roles within firms. However, she noted that in the 1980s, college degree programs in HR provided a new talent pool of HR professionals and helped to further the profession.

An HR consultant reported that SHRM (strategic human resource management) progressed aggressively until the late 1990s, and that SHRM along with “Human Capital Development” gained in importance and priority with increases in productivity, diversity, and increased mergers and acquisitions activity. The career compensation expert claimed

professional HR was “on a tear,” and talked of the development of large market for third party HR advisors. Two persons relayed that the economic downturn of the late 1990s, along with 2001’s troubles, contributed to HR profession suffering a setback. A consultant referred to HR’s continued status as a “cost center” as a contributor to keeping the profession from maintaining its prestige and power within the firm. However, this professional along with two others characterized the current state as “the pendulum starting to swing back” toward the stature and impact HR enjoyed in the 1990s.

Two interviewees noted that they saw the HR growth in the 1980s and 1990s as particularly driven by the search for talent that was generally hard to find. This correlation between HR’s primacy and talent pool demand and supply was a common sentiment among most interviewees. One interviewee noted that benefit costs rose and compensation plans became more complex as firms began to put more resources into attracting and retaining talent. She commented that with this increased emphasis in human capital management, human resources became more organized and bureaucratic. According to this HR expert, CEOs were paying more attention to HR as overall firm costs rose with the advent of benefit programs like defined contribution plans. Eventually, she noted, millions of dollars of HR-related expenses were now hitting the bottom line numbers. During this period, HR managers said that they also started to become more of a trusted advisor to senior management.

One practitioner noted that a fundamental change in HR has occurred over the last five years. He said new measurements of HR effectiveness are being called for with benefits being outsourced—the movement is away from the traditional transactional nature of the HR function. Over the last twenty years, HR has increasingly helped the

firm to grow, he noted. Another said HR was “constantly raising the bar.” One chief-level executive remarked that strategic human resources management ‘is helping to enable true collaboration over yesterday’s emphasis on individual contributor power.’

One interviewee noted that today, HR is vibrant and involved in the areas of learning and leadership development. He cited the activities of identification and tracking of leadership talent, mentoring, training, and organizational learning (shared and peer learning) as critical functions.

Values, Principles, Organizational Maxims, and Culture

One career HR executive indicated that he believes clear and visible values are important and valuable if they pass ‘the action test.’ This interviewee provided an example: “a clear test was if you observed a firing decision that was based on values. This happened at General Electric.” An executive from a large financial services firm cited a disconnect between ‘what is said versus what is done.’ This was echoed by a small firm HR manager who felt there was a “disconnect between what executives say and do at large firms.” A question posed in the interview by one professional was “are they [values] internal as well as external [marketing]?” One HR professional claimed that HR ensures the firm’s values are lived “by the actions we put into play.” A VP of Corporate HR said that “HR helps solidify the culture...HR becomes an enabler.”

Two professionals from small organizations agreed on the importance of values, but disagreed on whether they need to be documented. One HR lead who also serves as chief financial officer for her firm felt that values were about story telling and that visions were best verbally articulated. However, she also shared that her management team has

suggested to their founder and CEO to think about creating and documenting a set of values. Another professional worked to create values for his firm:

- Hire great people and invest in them.
- Always improve.
- Do the right thing for clients, staff and investors.
- Provide high value, long-term relationships.
- Have fun!

On the topic of culture and specific values, all but one general practitioner explicitly noted and supported the practice of recruiting for culture and value fit. One of these interviewees said that they look for an “outlook on life and a spirit that meshes” in new hires. A senior HR professional talked about the principles of minimal hierarchy, simplicity, the elimination of “control and observe” management, honesty and trust between workers and management, the resistance of bureaucratic process and rules, and holism.

Two interviewees also talked about the value of collaboration and group decision making. A chief-level executive cited the importance of “minimizing the effect of one person, for better or for worse.” An HR professional talked about a “zero-tolerance for ego-driven decision making.”

Core Activities and Organization of the Human Resources Function

A general HR practitioner stated that HR’s core activity is adding value in attracting talent. Another HR professional, responsible for her firm’s “Great Workplace,” noted the importance of focusing on retention—of showing employees “the value of staying”—by quantifying and communicating the long-run benefits to employees. One

interviewee talked of the new title of ‘Talent Management Officer’ and suggested that the talent management function should be part of HR.

Six of the seven general HR professionals agreed that strategic functions like organizational development (OD) should reside within HR. One career compensation expert said that “HR could drive OD, but won’t. No HR person on the earth can do this. OD requires credibility—HR doesn’t have it.” One interviewee who works in a large, multi-divisional organization insisted that “HR should have all ‘HR’ roles centrally organized,” including recruiting, learning and development, and retention efforts. This HR professional explained that HR in his firm was once decentralized and embedded, but it is now centralized for measurement and talent management. He suggested that centralization allows for talent to be moved and shared across business units. He added that fully central HR can better ‘own human capital, offer more leadership development, and allow for the creation of entry-level training programs.’ One executive thought that firms with ‘closed systems’ like Procter and Gamble (P&G) need to have management rotation, and “level, framed talent reviews.” When asked about his perspectives on what leadership development in biotech looked like, a retained search practitioner reported that he expected a firm like Millennium Pharmaceuticals to have structured rotation system, whereas at a firm like Genzyme, general management development would be unstructured—part of the culture.

One interviewee from the retained search industry claimed that up until three years ago, his own firm’s HR function was the traditional benefits-oriented department. He reported that benefits management is now completely outsourced, leaving the internal HR group with the responsibilities of organizational development, organizational

effectiveness, compensation design, and program design. He added that the functions of consultant and advocate, and the responsibilities for attraction and retention also remain inside HR. An HR head in a small firm indicated that the general human capital management responsibility was distributed across the four-person management team, but that the internal administrative functions of benefits and compensation were delegated to two specialists.

Two general HR practitioners talked about compensation, incentives and rewards. One interviewee insisted that HR is mostly about the technical function of compensation. A small firm HR executive implemented a compensation system that provided equal incentives for firm-wide performance, with smaller incentives for individual performance. A retained search professional characterized the biotechnology compensation model “not as stringent” as those of other industries.

Measuring HR Effectiveness

Four interviewees in the general practitioner category talked of measuring HR effectiveness. A chief-level executive stated that “enough quantitative data is there,” and a retained search professional reported that CEOs don’t want “quant jocks” as their HR heads. By contrast, a VP of Corporate Human Resources suggested a need for more of a focus on measurement:

Why aren't we, as true consultants, taking metrics, and driving it back to management? We need to develop the trust in management that HR can do this. It is HR's role to shed light on serious human capital strategy.

Another HR practitioner talked about measurement by frequently assessing qualitative factors of career satisfaction through employee surveys, and using quantitative metrics such as turnover rate.

Executive and Firm-level Presence, Support and the HR Brand

Most HR professionals indicated that HR has the ear of and credibility with the chief executive officer (CEO) and the senior executive team. In at least two cases, interviewees reported that the top HR leader is a part of the top executive team, with the head of HR reporting to the CEO. The Chief People Officer (CPO) for a growing Boston-area company talked about being part of the CEO's "inner circle" and commented that the top leadership supported HR and a long-term focus. At one consulting firm, an interviewee reported, a "Human Capital Leader" sits alongside all senior business managers. A head of national HR practice for a retained search firm reported that CEOs value the HR function, and that CEOs are "pulling in HR upgrades" to their firms. This interviewee also related that "CEOs are saying that their biggest constraint is lack of talent capabilities" and that chief-level HR executives are having 'success in working with senior management teams to drive change and impact the bottom line.' He commented that the HR head is partnering with the chief financial officer (CFO). However, one professional noted that the trend of elevating the HR head to a direct report to the CEO seems to be reversing. He said Cisco and Microsoft had moved HR back to sit under the chief operating officer (COO). He also claimed that the more companies 'say they elevate HR, the less is the reality on the ground.' A corporate HR manager from a large-firm in the publishing industry chronicled the reporting changes his company's

head of HR had experienced over an 11 year term: “He reported to CFO, then to legal, then to the CEO, then to the COO, and today reports to the CEO again.” Regarding overall firm presence and impact, a CPO claimed that the “C” in her title provides important signaling to the firm.

Most general HR professionals had a consistent set of comments on the subject of the HR brand, indicating that a name change or “road-show” approach to HR image reinvention would be ineffective. A CPO noted that promotional “broad-scale branding efforts fail,” resulting in defensiveness on the part of employees. She claimed that the HR brand is not about presentations, but rather about the time on the ground—the real work. Another interviewee said “let results define the brand—deliver something new.” ‘A re-branding of HR comes from actions’, noted one interviewee, ‘not from a name.’

A retained search executive related that his observations of HR is well regarded inside firms like GE, UBS, and pharmaceutical and healthcare firms like Merck and J&J, where succession planning is taken seriously. However, he said that HR is generally poorly looked upon in companies in entertainment, publishing, and media. Four of those interviewed remarked that GE was a common source of HR expertise. One person said, “Many firms with good HR were incubated by people from GE.”

A small firm CFO contrasted HR and human capital—“HR” being administrative and transactional, whereas “human capital” connoted “all... everything.” One HR VP commented that HR and human capital are different—human capital management is embedded and involves everyone.

Two HR professionals interviewed had similar remarks regarding why HR has had difficulty in gaining power within some firms. One person reasoned that “HR is

treated as a cost on the balance sheet,” and another insisted, “At the end of the day, HR is a cost center.” However, one retained search executive who specializes in HR countered these two professionals’ claims, noting that he wasn’t hearing CEOs talk of HR as a cost center.

Talent Sourcing of HR Professionals and Executives

General HR professionals had a variety of perspectives on where HR talent is coming from today. One interviewee insisted that top HR leaders come from general management and legal areas, and that few are traditional HR. Another indicated that some senior HR executives are coming from line positions. One consultant and HR professional noted that very few compensation and reward specialists make it to the top posts in HR. Another HR practitioner said that people in the profession are dying breed. One person claimed that there have been too many ‘compliance people’ in HR, and that there is a general problem of denial in HR as the function is being outsourced. She commented further on this by comparing HR with other professions that have been outsourced, like “purchasing,” which has re-branded itself as “supply chain management.” This VP of HR complained, “HR is a bunch of weenies who want to stay in administration.” Lastly, one professional remarked that one of the side effects of the outsourcing of the administrative activities of HR is that today it is harder to attract talent into HR.

Most of those interviewed agreed on what kind of background HR professionals and executives needed. At least two persons indicated that the HR professional is a technician—an expert in compensation and recruiting. Other cited a strong compensation

background as important. A retained search consultant claimed the requirement of an HR professional is to have ‘credibility,’ and that compensation was the primary area of expertise. One interviewee suggested that those with backgrounds in finance, M&A, strategy, recruiting, or a law background for advocacy were good candidates for HR leadership. A CFO in charge of HR at a small firm came from a legal background. One person cited labor relations experts as a source of HR professionals.

Retained search experts indicated that CEOs see HR heads as industry agnostic, and that CEOs want to see HR success in different cultures. One consultant noted a contemporary desire for HR expertise from firms known for their HR 'schools' such as GE, PepsiCo, HP, Honeywell, Motorola, among others. A retained search HR practice head said that HR leaders need to be intellectual and responsive and be a mix of general manager and business level generalist. When asked about the biotech industry, one interviewee could see how they would bring HR people from different industries to ensure some heterogeneity in the HR staffing. Lastly, one HR expert commented, ‘small entrepreneurial firms and exceptions like Citibank will hire for heterogeneity in HR leadership. But large firms, in general, have narrower desires, they want experience.’

Movement to HR positions from within organizations was addressed by three interviewees. One sees HR people coming in from rotation programs, or from finance or operations. Another person agreed and said that movement to HR by people with non-HR backgrounds only happens internally. A compensation expert suggested that firms may put internal business or line managers in HR as growth opportunities. Another echoed this statement, saying that only when there is internal movement do they see HR people coming in from non-HR roles. Another noted that movement to HR is difficult to do from

non-HR backgrounds from outside the firm—recruiting ‘from the outside, you look for the HR professional...from the inside, he or she may come from a non-HR background.’

Key Challenges and Other Insights

A retained search HR practice leader suggested that HR should work to create an environment for a five to seven year career pipeline, where development is reinvented as a system, rather than something that’s formal versus informal, or culture versus program-based. Along the same line, another was concerned with retention and the portability of human capital, with employees less invested in the long term strategy, no longer guaranteed long-term employment. One career HR professional insisted that HR will continue to be non-transformational.

The HR VP who earlier noted the transition that purchasing made to supply chain management, suggested three options for HR executives: “1. get out, 2. retool, or 3. refine,” She believes the same applies to all organizational functions in any given transition period. One professional expressed concern about preserving and scaling (in high growth environments). A CPO claimed, “the literature is still old school.” Lastly, two of these general HR professionals posed questions that they felt were important to be addressed by further research and thought. Does HR segment their population? Is the HR function diminished if not reporting to CEO (e.g. COO, CAO)?

Through these interviews with general HR practitioners and executives, I found that the administrative functions of HR have been outsourced, leaving more room for the more strategic, value-added activities. These include attracting the right talent, retention,

leadership development, and acting as an internal consultant. Still, there were lingering concerns from a number of perspectives that HR was limited in its capacity to be a true change agent. Also, there was a clear indication that while values were important, the acid test was whether or not they were put into action in clear, transparent, demonstrable ways.

Biotechnology HR Practitioner Interviews

Historical Perspective on the Profession

Two biotech HR practitioners characterized “old HR” as command and control. One interviewee said “old HR” has an attitude that ‘they think they know more... they know better.’ One VP of Organizational Development characterized HR's popularity as dependent on supply and demand of human capital, and observed that demand is building.

A Chief Human Resources Officer (CHRO) noted that the HR profession started shifting before the 1990s bubble. He also talked of HR's role now as an inside consultant. Regarding the efforts firms have made in outsourcing the transactional and administrative activities, one interviewee noted that HR has been slow to bring in help, and that some would rather remain in administrative roles. One biotech HR professional believed that “HR won't go back to administrative stuff, but that pipeline development will always be there.” The head of HR for one firm talked about what HR today is missing: ‘there is a gap in future focus—the complex global environment needs to be considered by HR.’

Values, Principles, Organizational Maxims, and Culture

One HR practitioner believed that values and principles don't need to be documented at their firm—‘they’re actively embedded in the culture.’ One interviewee said that “leadership needs to practice the beliefs,” and that the rest of the firm “needs to feel it, see it, touch it in action.” An organizational development leader noted that at biotech, there is tangible, rational work, so the values and mission messages stick, whereas in other high tech industries and environments, there is sometimes a prevalence of “unfocused, baseless messages.” She added that biotech adds real value versus the ‘meta-value’ of her previous industry experience in financial services. Lastly, she noted that her firm’s culture and values has contributed to making her firm ‘one the top ten places for scientists to work.’

In talking about culture, an HR executive commented that their employees need to have comfort with ambiguity. He added that his firm champions the values of humility, collaboration, and is concerned about maintaining the culture with their growth in number of employees. To address the preservation of founder values, he noted that they formed a “legacy committee.” A VP of organizational development noted the connection between physical workplace design and the notion of transparency in her firm’s culture. The office layout, she noted, was such that there were very few solid walls—many partitions were made of glass. One interviewee asserted that HR is not the keeper of the culture, but rather “facilitates managers to have a positive culture.”

Biotech HR professionals talked about a number of values and principles that are important in their firms. An HR VP reported that her firm built its new physical space around the desires of employees, and around the values of “connection, collaboration,

and creativity.” A senior executive HR head said that HR needs to ‘take care of people, foster a culture that encourages initiative and risk taking, and provide for highly iterative trial and error.’ A VP of HR noted the importance of ‘cultivating external connections.’ Holism in values and the implementation of principles was mentioned by three interviewees in biotech, and one noted that HR plays a role in providing alignment between values and on-the-ground action. Another interviewee said that “HR is sponsoring cultural alignment.” Another interviewee shared that ‘HR helps to match values with incoming human capital.’

The VP of HR for a small biotech firm talked about HR, values, and what she observes of Johnson & Johnson (J&J). She noted that HR provides alignment at J&J, that values are documented, but also ‘infused in the hearts and minds from top down.’ She observed that J&J acquires other companies on the basis of value fit. A VP of organizational learning agreed with this observation, and cited an example where J&J didn’t make an acquisition due to lack of value fit. She also shared the story of her firm’s HR and values initiative. This smaller firm, she noted, brought in founding principles, and professionalized HR when the firm was only 32 people in size. She thought it was important to have values documented and on the ground and cited J&J as a case in point. At her firm, the employees eventually asked that the values and mission be documented, and they worked at creating the values with employee involvement. Lastly, she felt that values should be “goal independent” and suggested as a test of their efficacy: “do you lean on them in hard times?” Good values “keep organizations together in tough times.”

Two non-HR executives in biotech were also interviewed—one, a senior VP (SVP) reporting to the CEO, and the other, a CEO. The CEO reported that they regard

employees as coming first, then customers, then shareholders. He also shared that in evaluating all mergers and acquisitions (M&A) they look for culture match first. The SVP I interviewed reported similarly, but that they look for culture match only on large M&A events. Of culture, the SVP said, “the culture is. HR supports the culture. Executives carry culture in stories.” He also thought it was important that values not be written down, and shared some of the values his firm operates on. These included humility, the patient as singular focus—the mission, and on recruiting and development values he claimed it’s not “what you know,” but rather “who you are.” Emphasizing the value of collaboration, the CEO asked if ‘new people coming in to ‘build consensus or are they steamrolling?’

On organizational structure, the SVP shared that he sees the firm as more horizontal than vertical— as one large team, very flat, with few static 'manager-subordinate' relationships. He also shared that he was concerned about size. The CEO reported that he was also concerned with their growing size, but that they work to ‘maintain smallness, response ready, and flat.’ His firm has a very loose organization, which, he said, is “hard for some to tolerate.” He added that his firm was built on small and large level teams, that they have a flat organization, with a relatively small group of active managers.

Core Activities and Organization of the Human Resources Function

One HR professional noted that the high value added in HR is in leadership and organizational management. An SVP cited the “power of the individual” with regard to HR’s mandate within his firm. He also made reference to Ghoshal and Bartlett’s (1997)

book *The Individualized Corporation*. A VP of learning and development touted “systems” over “programs.” Another interviewee noted that ‘traditional is HR too policy- and rules-driven.’ A non-HR executive remarked, “good HR is flexible about rules, and inflexible about making culture work.” Another said that ‘HR is about creating tone and maintaining tone... it's not mechanical.’

On how HR is organized, all HR professionals from large environments noted that the administrative tasks have been outsourced, most of HR is central, with business partners functioning as decentralized agents. One VP of HR said that J&J centralized their transactional HR functions five years ago. Also, interviewees from large firms reported that organizational development and organizational learning roles report directly into HR. One interviewee reported that OD (organizational development) likes to keep themselves separate, claiming they like to say “we're the cerebral people.” He insisted, however, that OD should be integrated into HR. One interviewed believed that OD is ‘not necessarily high touch,’ but shared that “benefits, everything—it all needs to be done well.” One person shared that they are centralized to integrated learning, training, and development, and so that they can share common structure across functions, business processes, and to better address regulatory needs. An HR head felt that the way some HR practices were dealing with Sarbanes-Oxley was ‘out of control,’ indicating that some firms have responded by making compensation more formulaic. He said that his firm was resisting this, and resisting monitoring. A top HR leader for an organization of 9000 employees, reported that they had a small central group of 16 at corporate headquarters, with a local presence of 5 to 8 people per site. The field HR people report to local general managers and have a dotted line reporting relationship to corporate HR. He claimed that

they had a closely knit, highly coordinated group, with a general understanding of the business.

On the subject of HR as a provider of inside consulting, one senior HR professional indicated he prefers the term “advisor” to consultant. An executive shared that he sees HR as bringing facts to management, building relationships, building trust for all leaders and managers, and fostering transparency and authenticity. One person noted, “HR should help foster open, honest dialogue, and provide honest feedback.” A senior HR manager for a global firm said “HR needs to meet people where they are. If you have good relations with your people on the ground, they know.”

At least two of those interviewed felt that compensation drives behavior, and one HR professional noted that her firm provides individual and team-based rewards. A CEO whose firm provides services to biotechnology said that some ‘biotech companies overpay, they have too many people with not enough work. It’s a sexy environment, but short-lived.’ He went on to say that the ‘big pharma model is broken, with little stability, and lots of people.’

Regarding employee development, two interviewees talked about building general management (GM) capability through work assignments. A CEO commented that developing GMs is challenging, but that they allocate significant funds for education. One biotech executive described their informal development environment, saying that “people need to find own paths.” He added that they are bringing in MBAs, and giving managers “program management” experience as a means of GM development.

A CEO noted, “If you don't put all of your emphasis on employee relations, you run the risk of people bailing when times get tough.” An organizational development head noted that they have needed to teach people management skills, including interviewing and selecting. A CHRO reported that performance management was handled informally as “conversations” more so than with documents. Another HR professional noted his firm’s verbal performance reviews. A SVP of HR reported their system of performance reviews every quarter, wherein managers asked subordinates, “what do you want to be doing in 5 years?” He added that they try to gauge from employees how the firm is doing in this regard. He also echoed earlier the reported suggestion that HR is best thought about as “systems, not programs.” A VP of HR for a smaller firm reported the use of employees, not consultants, for an organizational alignment project.

On recruitment and selection, one executive indicated that his firm promotes 80% from within. Another indicated that recruitment is biggest enabler for the organization. An executive reported that they bring senior people in from the outside, using retained search. In one case, a professional reported his firm’s 22% employee referral rate, and noted that they interview each applicant 2-3 times and spend lots of time searching for top-flight employees. One executive remarked that his firm hires for “traits—vision, heart, feel.” A VP of organizational learning indicated that his company outsourced only the technical and coordination activities of recruitment, and that they are retaining internally the designing of recruitment, ‘providing clarity on style, brand, and attraction.’ He added that they continue to own the ultimate selection process. One executive

commented that he likes the ‘Jack Welch 4 types GE model’ but thought that “dropping the bottom 10 to 20% was too hardnosed.”

Measuring HR Effectiveness

All interviewees in this area noted their use of qualitative, subjective, intuitive data on HR effectiveness as assessed through employee surveys. One executive said, “employees know,” and another commented that “employees are the great equalizers.” Two interviewees discussed their use of quantitative measures, with one citing traditional measures in: recruitment, retention, internal transfers, promotions, employee sourcing data, and the number of positions filled internally versus from the outside . Another executive mentioned retention, turnover, and employee longevity as important quantitative measures. A VP of organizational learning discussed measurement by either triangulation or by showing causality. Given the challenges of showing causality, he said, he uses triangulation methods. On retention, one executive asked, “have we built a culture where people want to stay?” Another HR professional mentioned the use of qualitative and quantitative employee surveys, and that they act on the responses. One HR professional suggested the strategy of choosing a metric (e.g. revenue/employee) and watching the long term trend, while one SVP of HR called into question the need to measure financial impact, asking “do we need to tie HR practices to bottom line, or is it obvious?”

Executive and Firm-level Presence, Support and the HR Brand

All HR professionals and executives interviewed in biotech insisted that HR has the full support of the senior executive level, and in each instance, the head of HR reported to the CEO. Speaking about his HR head, a CEO stated, “I support what he does.” One professional noted a close mentoring relationship with the CEO. A CHRO reported that in his career, HR has “always been ‘at the table.’” One person commented that, just like a CIO or COO, the HR head needs CFO backing. All interviewees cited the long term view that the executive level has of HR, one noted that HR investment is a ‘marathon not a sprint.’ One SVP of HR suggested that HR leaders need to be part of the strategy dialogue, rather than simply reacting to already formulated strategy. He also noted that his CEO supports HR, and “makes” the people side of the equation for the rest of the firm.

One practitioner noted that HR's popularity in the firm is dependent on the supply and demand of human capital, and that more demand is building today. One interviewee suggested a brand name change from Human Resources to “Human Capital,” but another countered this, claiming that whether you rename HR to the ‘People Department’ or ‘human capital,’ people will still know it’s HR. At the overall firm level, one interviewee noted that in biotech, “scientists rely on HR to bring in the soft stuff.” Another agreed that given the ‘profile of scientists,’ they would rather rely on HR to do the people stuff.

Talent Sourcing of HR Professionals and Executives

Noting the qualities of what it takes to become of an HR leader, one HR professional remarked, “Compensation and ‘quant jocks’ don't move up in HR or organizations.” Another interviewee agreed that compensation professionals are unlikely

to move up in the firm. However, he remarked that “in highly structured environments, compensation people are the ones you want.” He added that he felt compensation people are lousy at employee relations, and that he would “rather take a chance on anything but compensation experts.” Lastly, he commented on the difficulty of being strategic when ‘working on the ground,’ speaking specifically of the compensation function.

One senior HR leader indicated that he came from an experience at GE in the early Jack Welch days. Three of those interviewed noted seeing HR leaders coming from labor relations, and law backgrounds. One HR leader mentioned his firm’s practice of bringing in people in from different industries for heterogeneity. One VP reported that she came from a training and development background in the financial services industry. An SVP of HR felt that in biotech, HR is ‘too incestuous,’ noting that he brought in people from outside the industry. He added that he didn’t want to have HR managers who he characterized as “policy people quoting chapter and verse.” Another interviewee reported the need for HR professionals to have relevant experience and credibility, and added that she saw people coming in from consulting, training and development, and M&A backgrounds.

Key Challenges and Other Insights

Interviewees posed a number of questions for research, and expressed needs that they would like to see addressed. One asked, “How do we get leaders to stay?” Another said “we don’t have leadership metrics to drive organizational change” and expressed a need to add scientific, empirical data.” Another person would like to know how HR is structured in other firms, and what the reporting relationships are.

A variety of other questions and insights were offered. A VP of HR asked, “are we attempting to build leaders who don't match with what history tells us works, what is true leadership?” She claimed, historically, leaders are not well-balanced, due to the selection process of the past. When asked about which biotechnology firms he thought had the best HR practices, a CEO of a firm that is a supplier to biotech firms (along with his SVP of HR) cited Amgen, Genentech, and Genzyme.

One biotech HR professional likened HR's recent challenges to how IT has been challenged. One HR expert complained that sometimes the HR literature conveys “should or should not.” One person commented on the future of HR, suggesting, “the world is flat - HR should seize that!” This expert suggested a search for other mental models, more relevant and cost effective, suggesting you have to circle the globe. One VP of learning and development commented that human capital management has more to do with character. He added the importance of having the ‘mindset of a puppy-dog, rather than being arrogant... if you think you know, you have a high chance of failure.”

From my interviews with HR practitioners and executives in biotechnology, gained additional perspectives on the dimensions human capital management. Within biotechnology, I found some disagreement on the role and efficacy of documented values, while noting a common theme of HR's role in aligning the firm with values, and enabling the actionable application of values in a corporate culture. There was agreement on selecting and acquiring for culture and value fit, and the architectural concern about size—retaining the agility of a small organization as firms experienced growth. Some

interviewees felt that they were succeeding in this area, retaining informal performance management practices, keeping lean top management staffs, and few levels of hierarchy. All biotech professionals interviewed reported that the administrative tasks of HR had been outsourced in their firms, and most talked about their structuring of HR as a central, all-encompassing human capital function, incorporating organizational development, training, and leadership pipeline maintenance. Qualitative measurement by employee surveys was frequently mentioned by these professionals, and each shared that HR has the full support of senior executives, that the long-term view is honored, and in all cases, the head of HR reports to the CEO. There was some agreement on the practice and need for building industrial heterogeneity in HR departments, by way of hiring HR professionals and executives from varied backgrounds.

Chapter Summary - Comparative Analysis

Historical Perspective on the Profession

There was agreement between the general HR practitioners and the biotechnology HR professionals on the relationship between job market cycles and how HR is regarded in the firm in line with those cycles. Interviewees from both groups noted that when the talent pool supply was lean, with higher talent demand than supply, HR's role has become more important. Likewise, HR's importance and clout has suffered during economic downturns when supply overtakes demand. Professionals in both groups indicated they saw HR's organizational power on the increase now, recovering from the difficult years following the technology market bubble collapse.

Values, Principles, Organizational Maxims, and Culture

Both general and biotech HR professionals and executives agreed that values need to be active on the ground in order to be relevant, and that actions based on values needed to be seen, and values followed by leadership. Professionals in both areas also agreed that documentation wasn't necessary, although some general and biotech practitioners from smaller firms supported the notion of documentation. In one small firm, the employees asked for the values and principles to be created and stated. There, senior leadership responded by involving the employees in the values and principles creation process.

Collaboration, hiring for culture fit, looking for culture match in acquisitions, and the holistic implementation of organizational principles was a common theme in most of these interviews both on the general and biotech sides. There was generally more talk of values and principles in the biotech interviews. And on the general practitioner side, one HR lead who also serves as chief financial officer for her firm felt that values were about story telling, and that visions were best verbally articulated.

Organization of the Human Resources Function, Executive and Firm-level Presence,

Executive Support, Core HR Activities, and the HR Brand

The Massachusetts Biotechnology Industry Directory, an online publication of the Massachusetts Biotechnology Council's (MBC) Massachusetts Biotechnology Education Foundation, provides what they claim are typical organizational structures for each of the above classifications. Interestingly, in each classification, Human Resources is shown to be a subset of Administration, bundled with Finance and Administration, where a top

level HR Director, reports to a VP of Finance and Administration. While this might reflect perhaps the model of the 1980s and 1990s, this picture didn't align with how I found HR to be organized within the firms I studied. In all cases in the biotech interviews, HR function reported directly into the CEO. On the general side, most HR heads reported to the CEO. Moreover, there was strong agreement within biotech of the executive-level support, from both the HR practitioners as well as the executives they report to. This strong support was also noted on the general side, albeit with some skepticism from at least two interviewees.

As noted earlier, there was discussion on the topic of firm-wide HR support and power relative to the supply and demand of talent—when talent was in high demand, so was HR. This was echoed by biotech practitioners, but some general practitioners cited HR's lack of power more attributable to the HR being deemed a cost center, not a strategic profit driver. Oddly, two of the HR professionals schooled at GE agreed that “at the end of the day, HR is a cost center.”

The theme of centralization for alignment was common to both biotech and non-biotech environments, and all HR professionals from large environments noted that the administrative tasks have been outsourced. With little exception, there was agreement across both general and biotech practitioners that all activities “HR” be centralized within HR, including organizational development (OD). The minor disagreement that did exist was centered around the argument that HR doesn't have the credibility to drive OD. All interviewees from large firms reported that organizational development and organizational learning roles report directly into HR. Some people noted that in the centralized environments, they also had HR business partners functioning as

decentralized agents. Benefits from integrated learning, training, and development were cited as drivers for grouping the HR activities under one central function.

Most agreed that compensation was the primary driver of behavior and most interviewees reported mixes of base and incentive pay, both for individual and firm-level performance. A general practitioner supposed that the biotech performance management system would be less structured, and this was indeed found to be the case. Most biotech practitioners reported informal performance reviews, with high frequency ‘conversations’ being the primary activity. The theme of systems over programs was common within the biotech community.

On the subject of the HR brand, there seemed to be a mix of views, with most claiming the name is less important than the action and work of HR, with others suggesting that “human capital management” might be a more appropriate term. In biotech, interviewees noted that the scientific staff looked to HR to bring the ‘soft stuff.’

Measuring HR Effectiveness

Discussions of measurement yielded an overall sense that gauging HR effectiveness mostly involved conducting employee surveys on largely “qualitative” measures—thus making quantitative the qualitative or subjective assessments of employees. This seemed to be reflective of the level of support granted by CEOs and senior executives to HR leaders. Most practitioners felt that they didn’t have to make special efforts to provide proof of financial efficacy of their activities and policies. Support for strategic HR management was even present at the board level in some instances.

Talent Sourcing of HR Professionals and Executives

Compensation was the common theme among all interviewees regarding where the deep expertise in HR resides—the single most called for technical HR skill. However, there was agreement between the biotech and non-biotech interviewees that compensation specialists infrequently rise to top leadership positions in HR. And in biotech, there seemed to be a bit of hesitance to invest in compensation specialists. Further, practitioners, consultants and executives in both general and biotech environments noted a desire for industry agnosticism in HR leadership. There was a suggestion that biotech HR could benefit from more heterogeneity in industry background. All of those interviewed noted that very rarely are firms bringing non-HR people from outside the industry in to lead HR.

Key Challenges and Other Insights

Several interviewees remarked on the challenges of retention and shared some of their visions of how firms could better hold onto talent in the future. Several HR leaders suggested that HR needs to take bold steps to reinvent itself, not unlike how other organizational functions have had to in the past (e.g. purchasing, IS/IT, etc). Some experts suggested looking globally for exemplary practices, concepts, and ideas.

Chapter 4

Field Study—Survey of Global Managers

In this chapter, I present the results and analysis of the survey I administered in March 2006 to members of the 2006 MIT Sloan Fellows Program Class. The survey was printed on a single page, and personally administered to a group of 98 globally diverse managers on a field trip in San Francisco, California. I received 69 responses. The instrument asked a total of 14 questions. Four were demographic questions, asking for job function, organization size, industrial and regional background. The remaining 10 questions asked for the respondent's views on their perceptions of the HR function and the management of human capital. Seven-point Likert scales were used to measure individual attitudes. A T-test was not performed on the data due to relatively small sample size. A copy of the survey is attached in Appendix A (Table 4-2 shows the raw data sample means and inter-correlations of survey items).

Sample Demographics

Table 4-1 presents the sample characteristics for this survey. Questions not answered are counted as "L.B." (left blank). Demographic questions A, C, and D, job function, industry, and region, respectively, were regrouped to ensure more useful sample sizes. Respondents that chose multiple answers were counted simply as having selected multiple categories (denoted with "Multiple" in Table 4-1).

Table 4-1: Sample Characteristics

Demographic Description	n=69
A. Experience/Job Function	n
Sales or Marketing	8
Multiple Functions	5
IT or Operations	8
Executive/GM, Finance, or Legal	29
Academic, R&D or Product Mgt/Dev	16
Start-up or L.B. (Left Blank)	3
B. Organization Size	n
10-50	8
50-250	13
250-1000	13
1,000-5,000	11
5,000-10,000	5
10,000+	17
Multiple Sizes	2
C. Industry/Sector	n
Manufacturing	8
IT or Engineering	20
Gov't, Edu., Healthcare or Enviro.	9
Fin. Serv., Gen. Trading, or Real Estate	10
Energy	8
Priv. Equity, Legal, Consulting,	
Start-up, Multi-sector or Other Sector	14
D. Region	n
America	28
Asia	27
Europe	3
Global or L.B. (Left Blank)	11

Survey Results

Table 4-2 provides descriptive statistics and item inter-correlations on the survey data set. In presenting this data, this section is organized into the following four areas, each mapped to the relevant survey questions, noted accordingly:

- Perceptions of HR's value, impact, organizational status, and brand (questions 1, 2, 3, 7, and 9)
- How managers view the core activities of HR (questions 4 and 5)
- Expectations for how HR might be organized in Biotech (question 8)
- Assessment of HR's potential future impact (questions 5 and 6)

Table 4-2: Descriptive Statistics and Inter-correlations

Question	Mean	s.d.	Min	Max	1	2	3	4	5	6	7	8	9	10
1. Value	4.59	1.80	1	7	1.00									
2. Contributor	4.26	1.83	1	7	0.75	1.00								
3. Clout	3.85	1.70	1	7	0.54	0.71	1.00							
4. Admin. Outsourced	5.51	1.79	1	7	0.13	0.24	0.13	1.00						
5. Strategic	4.43	1.81	1	7	0.50	0.63	0.66	0.15	1.00					
6. Capability in Future	5.55	1.32	2	7	0.24	0.26	0.30	0.08	0.35	1.00				
7. Executive Support	4.39	1.67	1	7	0.49	0.43	0.48	0.11	0.45	0.14	1.00			
8. Biotech	4.76	1.77	1	7	0.26	0.43	0.36	0.22	0.38	0.26	0.28	1.00		
9. HR Brand Change	4.54	2.03	1	7	0.04	0.05	-0.19	0.12	-0.27	0.04	0.12	0.05	1.00	
10. Sys Dyn GM	5.10	1.72	1	7	0.06	0.03	0.07	-0.02	0.16	0.38	0.06	-0.06	-0.13	1.00

Perceptions of HR's value, impact, organizational status, and brand

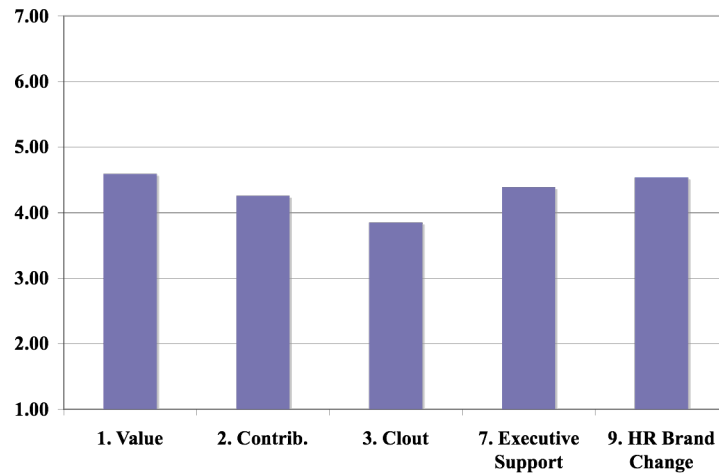
Questions 1, 2, 3, 7, and 9 on the survey (see Appendix A), dealt with how managers perceive the performance, impact, and effectiveness of HR on a number of levels: the overall value of HR, role of HR as a contributor to firm success, overall “clout” of HR within the firm, executive team respect and support for HR, and the relationship between the “HR brand” and the effectiveness and credibility of the HR function. The results from this series of questions are presented in Table 4-3. This table includes the total means for each of these questions, as well as the means from each demographic category grouping.

Table 4-3: Mean Values for Questions 1, 2, 3, 7, and 9

n	1. Value	2. Contrib.	3. Clout	7. Executive Support	9. HR Brand Change
69 Total Mean	4.59	4.26	3.85	4.39	4.54
n Experience/Job Function					
29 Executive/GM, Finance, or Legal	4.72	4.41	4.14	4.59	4.31
16 Academic, R&D or Product Mgt/Dev	4.88	4.38	3.88	4.31	3.94
8 Sales or Marketing	3.88	4.50	3.63	4.00	5.38
8 IT or Operations	4.00	3.50	3.88	4.50	4.38
5 Multiple Functions	5.00	4.80	3.50	3.80	5.60
3 Start-up or L.B. (Left Blank)	5.50	2.50	1.50	4.50	6.50
n Organization Size					
8 10-50	3.75	3.50	2.43	3.38	5.50
13 50-250	5.15	5.23	4.46	5.08	4.31
13 250-1000	4.23	3.62	4.23	4.00	4.62
11 1,000-5,000	4.55	4.36	3.82	4.36	3.91
5 5,000-10,000	6.40	6.00	5.40	4.80	3.60
17 10,000+	4.29	3.65	3.18	4.35	4.71
2 Multiple Sizes	5.00	5.50	4.50	6.00	6.00
n Industry/Sector					
20 IT or Engineering	3.95	3.95	3.55	4.10	5.05
Priv. Equity, Legal, Consulting,					
14 Start-up, Multi-sector or Other Sector	5.07	4.36	3.54	4.43	5.29
10 Fin. Serv., Gen. Trading, or Real Estate	4.80	4.40	4.50	4.40	2.90
9 Gov't, Edu., Healthcare or Enviro.	5.22	5.11	4.11	4.22	5.11
8 Manufacturing	4.25	4.00	3.88	5.13	3.38
8 Energy	4.75	4.00	4.00	4.50	4.50
n Region					
28 America	4.21	3.68	2.89	4.14	4.96
27 Asia	5.52	5.07	5.00	4.85	4.11
10 Global or L.B. (Left Blank)	3.80	4.00	3.90	4.40	5.20
3 Europe	2.00	3.00	1.67	2.33	2.33

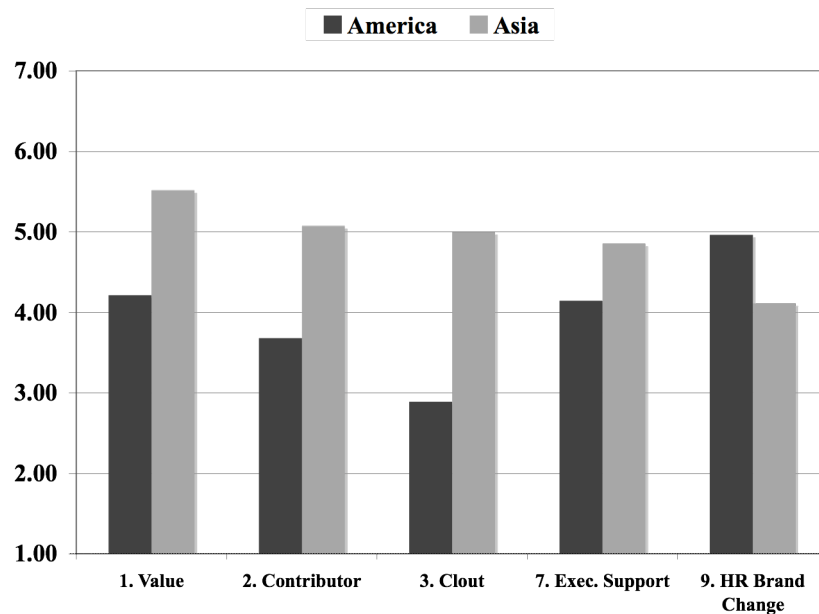
In responding to question 1, “In my experience, the role of HR/human capital management has proven to be of great value [7], or no value [1],” the mean result was 4.59. Question 2 stated “HR has been a key contributor to building organizational capabilities and firm success” and asked for the respondent to agree [7] or disagree [1]. The mean response was 4.3. Total means for questions 3, 7, and 9 are presented at the top of Table 4-3. This data is also depicted graphically in Chart 4-1.

Chart 4-1: Total Mean Values for Questions 1, 2, 3, 7, and 9



One notable difference in this grouping of questions on HR's value, impact, status and brand was found along regional lines. When the responses to question 1 were grouped by region, those from an Asian background (n=27) answered a mean of 5.52 out of 7, whereas those from the U.S. and Americas (n=28) responded with a mean of 4.21. When the responses for question 2 were grouped by region, those from an Asian background answered a mean of 5.07 out of 7, whereas the U.S. and Americas managers responded with a mean of 3.68. Similar differences followed for questions 3, 7, and 9. These differences are represented graphically in Chart 4-2.

Chart 4-2: American versus Asian Mean Values for Questions 1, 2, 3, 7, and 9



How managers view the core activities of HR

Survey questions 4 and 5 asked for managers' impressions of where they see HR today with regard to the administrative activities and strategic functions. The results from this series of questions are presented in Table 4-4. This table includes the total means for each of these questions, as well as the means from each demographic category grouping.

Table 4-4: Mean Values for Questions 4 and 5

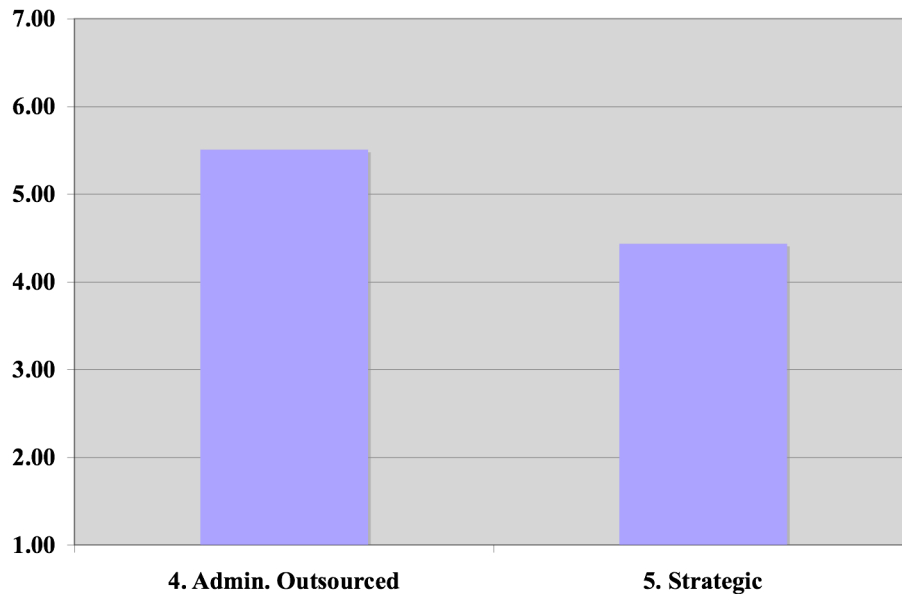
n	4. Admin. Outsourced	5. Strategic
69 Total Mean	5.51	4.43
n Experience/Job Function		
29 Executive/GM, Finance, or Legal	5.34	4.41
16 Academic, R&D or Product Mgt/Dev	5.31	4.81
8 Sales or Marketing	6.38	3.88
8 IT or Operations	6.13	4.50
5 Multiple Functions	6.00	4.80
3 Start-up or L.B. (Left Blank)	3.50	3.00
n Organization Size		
8 10-50	5.00	3.50
13 50-250	6.00	5.15
13 250-1000	5.69	4.38
11 1,000-5,000	5.64	4.36
5 5,000-10,000	4.00	5.60
17 10,000+	5.71	3.94
2 Multiple Sizes	4.50	5.50
n Industry/Sector		
20 IT or Engineering	5.35	3.60
Priv. Equity, Legal, Consulting,		
14 Start-up, Multi-sector or Other Sector	4.93	4.21
10 Fin. Serv., Gen. Trading, or Real Estate	5.40	5.10
9 Gov't, Edu., Healthcare or Enviro.	6.22	5.00
8 Manufacturing	6.25	5.00
8 Energy	5.50	4.88
n Region		
28 America	5.57	3.93
27 Asia	5.59	5.22
10 Global or L.B. (Left Blank)	5.20	4.00
3 Europe	4.67	3.00

In responding to question 4, “Administrative, transactional functions of HR (benefits, recruiting) are, or have been: outsourced [1], or retained inside firm [7],” the mean result was 5.51. Question 5 stated “HR is trending more strategic, encompassing roles of internal consultant, talent management, leadership development, attraction/retention of talent, compensation, organizational design: disagree [1], or agree [7]. The total mean for question 5 was 4.43.

The aggregate results from these two questions are shown in Chart 4-3. There seems to be an impression that administrative tasks have been more retained inside the

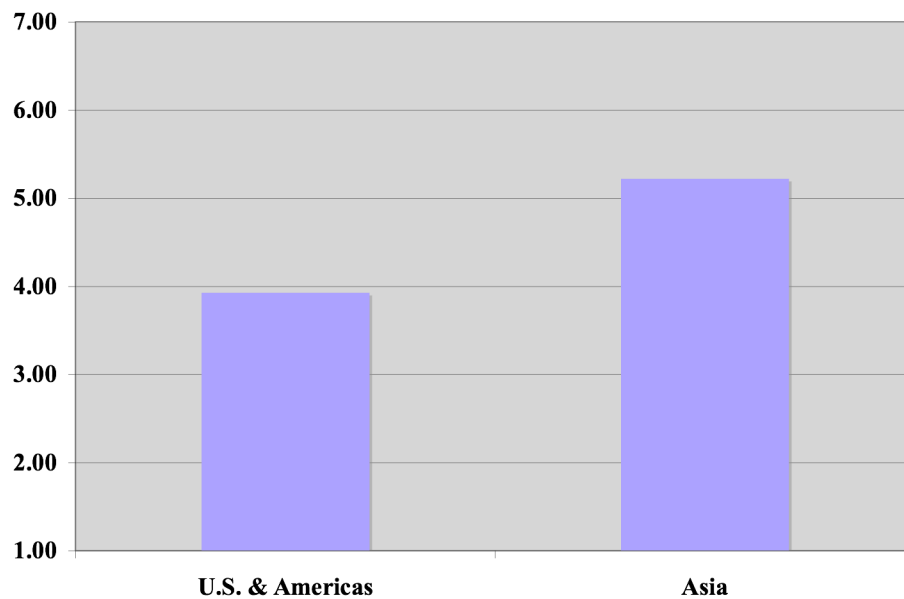
firm rather than outsourced. Also, the data shows that the surveyed managers don't see HR as strategic or moving in that direction.

Chart 4-3: Total Mean Values for Questions 4 and 5



As shown in Chart 4-4, differences were again found along regional lines. When the responses to question 5 were grouped by region, those from an Asian background (n=27) answered a mean of 5.22 out of 7, whereas those from the U.S. and Americas (n=28) responded with a mean of 3.93. These results follow a similar spread as was found in the previous section.

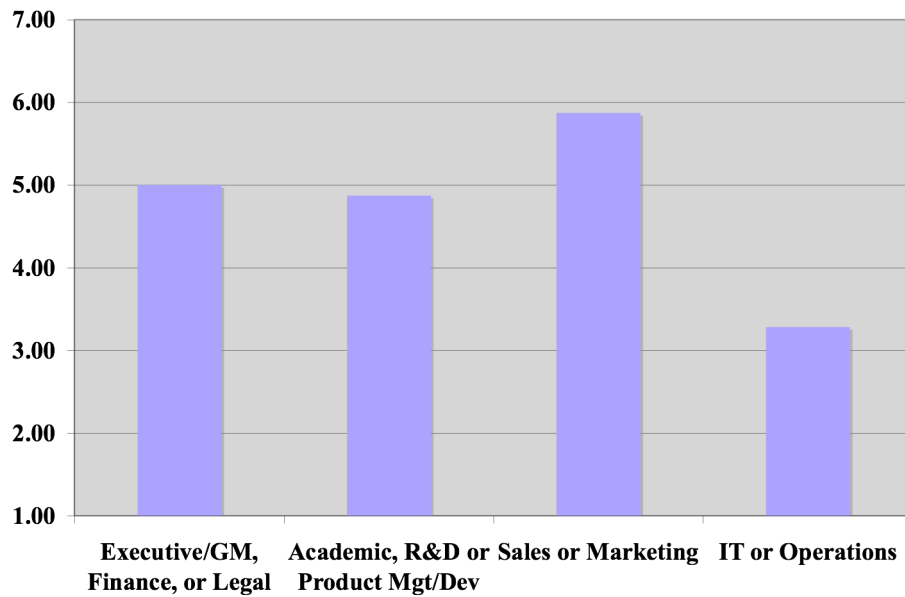
Chart 4-4: U.S. and Asian Mean Values for Questions 5 - Trending Strategic



Expectations for how HR might be organized in Biotech

Question 8 asked about respondents' expectations about whether HR in biotech would be administrative [1] or strategic [7]. A total mean of 4.76 showed an general expectation of strategic over administrative. However, when analyzing by experience/job function, a significant difference in expectation is notice between IT and Operations and the other functions, as depicted in Chart 4-5.

Chart 4-5: U.S. and Asian Mean Values for Questions 5 - Trending Strategic



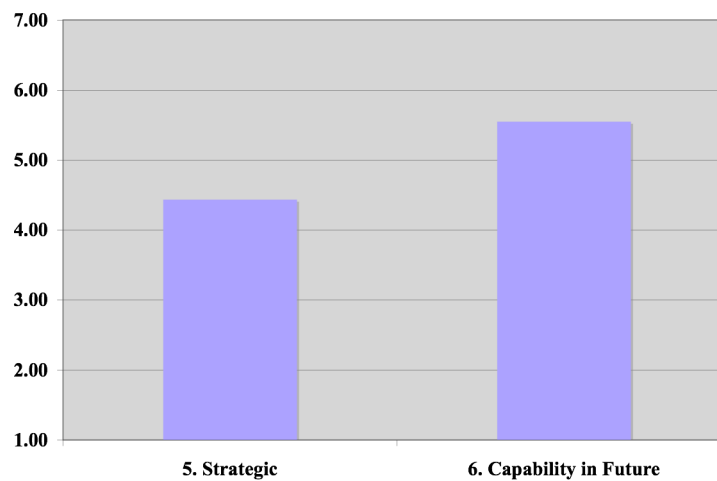
Assessment of HR's potential future impact

In looking at the results of questions 5 and 6, there was consistent agreement on how people perceive the potential future impact of HR. Their view is that HR has the capability to become more relevant in the future. These results are shown in Table 4-5.

Table 4-5: Mean Values for Questions 5 and 6

n	5. Strategic	6. Capability in Future
69 Total Mean	4.43	5.55
n Experience/Job Function		
29 Executive/GM, Finance, or Legal	4.41	5.45
16 Academic, R&D or Product Mgt/Dev	4.81	5.75
8 Sales or Marketing	3.88	5.13
8 IT or Operations	4.50	5.38
5 Multiple Functions	4.80	6.40
3 Start-up or L.B. (Left Blank)	3.00	5.50
n Organization Size		
8 10-50	3.50	5.50
13 50-250	5.15	5.85
13 250-1000	4.38	5.77
11 1,000-5,000	4.36	5.64
5 5,000-10,000	5.60	6.00
17 10,000+	3.94	5.06
2 Multiple Sizes	5.50	5.00
n Industry/Sector		
20 IT or Engineering	3.60	4.80
Priv. Equity, Legal, Consulting,		
14 Start-up, Multi-sector or Other Sector	4.21	5.71
10 Fin. Serv., Gen. Trading, or Real Estate	5.10	5.60
9 Gov't, Edu., Healthcare or Enviro.	5.00	6.11
8 Manufacturing	5.00	5.88
8 Energy	4.88	6.13
n Region		
28 U.S. & Americas	3.93	5.64
27 Asia	5.22	5.70
10 Global or L.B. (Left Blank)	4.00	5.00
3 Europe	3.00	5.00

Chart 4-6: Total Mean Values for Questions 5 and 6



Concluding Discussion

Overall, the survey results reflect a mixed impression of HR among this group of global managers. When segmenting the sample, however, significant differences in opinion are shown between Asian and U.S. (and Americas) managers regarding the activities of HR. This seems to suggest a difference between how HR functions or how organizations are structured in Asian firms and U.S. and Americas firms.

There seems to be an impression that the administrative tasks of HR have not been outsourced and that managers do not generally observe HR as being strategic. When looking at the data along regional lines, however, there once again appeared to be a difference between U.S. and Americas and Asian managers' impressions. Those from an Asian background saw HR as strategic whereas U.S. and Americas managers viewed HR as less so.

There was an overall expectation among the entire sample that HR in Biotech would be more strategic than administrative. When looking at the data along experience/job function lines, this expectation became more extreme. IT and Operations managers expected HR in Biotech to be more administrative, whereas other managers expected HR playing a more strategic role. Sales and marketing managers had a significantly greater expectation that HR would be more strategic in biotech. Lastly, there appeared to be consistent agreement among the entire group that HR has the capability to become more relevant in the future, suggesting that there is a fair amount of 'white space' in the HR profession for innovation and impact on the entire firm.

Finally, there were a number of handwritten comments on the surveys. Some of these comments reflected strong feelings about HR. A manager from the finance function in the energy industry in Asia noted, “HR acts too... unilaterally... needs to be more collaborative with business units.” A North American general manager from a large organization in the manufacturing sector wrote, “We have begun moving technical people into HR to improve processes, [with an] emphasis [on] building talent within the organization.” This manager also qualified his full agreement with question 6 on the survey (that HR has the capability of becoming more relevant), noting, “can’t get any worse than today!” Another North American-based professional with a start-up background commented, “HUGE difference between HR (outsourced) and human capital management (CEO’s job).” And with regard to question 9 (on whether or not HR needs a brand/name change), this respondent noted, “YES!” Lastly, a European marketing manager with global experience characterized HR as “a necessary evil, on a need base.” He also thought that HR was “trying, but failing” to be more strategic. He also noted that HR should:

- develop people—personnel development is KEY
- be respected
- be a creative department
- be the strongest department in the company
- be trusted advisors that stick to the plan of the company

My takeaways from this data are that managers in general have high expectations of HR, and believe that HR can be more relevant in the future. While there are some strong cynical impressions of HR’s role, particularly from the perspective of managers in the U.S. and the Americas, most everyone sees the glass half-full—that in the future, HR can and will change to be more organizationally respected, involved, and effective.

Chapter 5

Reflection, Conclusions, and Recommendations

In this chapter, I will briefly reflect on my findings summarized in Chapters Three and Four and tie these to some of the literature I reported on in Chapter Two. In addition, I offer a few conclusions and recommendations.

Reflection

My first and only experience working in the biotechnology field came out of a position I was assigned from Northeastern University's cooperative (co-op) education program. As a full-time student in 1991, I joined Genetics Institute, Inc. (GI) in Cambridge as a scientific communications specialist. When my co-op assignment was complete, I remained with the firm for about four years. My recollections of my experience at GI mapped closely with some of the insights on the culture of some of the firms I studied, and in some of the literature I reviewed on the biopharmaceutical industry—most notably, Monica Higgins' *Career Imprints*.

As I moved through the interviewing process, I discovered two common human capital reservoirs: Baxter and General Electric. The source for much of the leadership in Cambridge-area biotechnology firms came from the health care and pharmaceutical firm Baxter. Many of the people I interviewed had, at some point, worked on an executive team with a former Baxter manager, had worked for a firm that had been led by a Baxter alumnus, or had worked for Baxter themselves. I also discovered that many of those I

interviewed had at one point worked for GE. Hence, I offer that GE has perhaps been to the HR function as Baxter has been to biotechnology executive leadership. This comparison is relevant insofar as it underscores the critical role that organizations play in shaping individual management practices. Moreover, it helps to make a unique point: both GE and Baxter have had a hand in shaping the nature of human capital management in the biotechnology industry.

Conclusions

Combining the field interviews and survey results with the reviewed literature, I present the following eight conclusions:

1. The administrative tasks of HR, what Baron and Kreps (1999) classify as “record-keeping, compliance, and personnel service delivery,” have been either diminished in their role in HR, or have been outsourced. HR is now more centralized than in the past for the purpose of integrating all aspects of human capital management for firm-wide effectiveness. HR is ‘high touch’ in the biotechnology firms I studied, whereas, according to those I interviewed, in the large pharmaceutical companies, HR is impersonal.

2. HR is a member of the top-level management team in the biotech firms I studied, with the head of HR reporting to the CEO, and is more focused on the strategic and long-term activities of the firm including strategy formulation, organizational design, leadership and organizational development.

3. A broader search for HR talent has been called for in the literature, and appears to be underway in some firms. Some CEOs seem to be looking for “industry agnostic” HR leaders who have a variety of HR experience in different industries and cultures. However, HR in biotech is perceived by some as perhaps too heterogeneous.

4. In the biotechnology environment, there was a noted preference for informal performance management characterized by frequent dialogue as opposed to formal annual reviews that are highly structured and documented. Additionally, in the Biotech firms I learned about, general management (GM) development is relatively unstructured—culture plays a role in an ‘organic’ or systemic development of talent.

5. Values and principles are important to managers, but they have to be matched with action to be relevant. There needs to be an active, clearly visible connection between the values and principles and the actions taken by the firm, the firm’s leaders, and the employees.

6. With increased outsourcing and splitting off of the administrative functions of HR, some have suggested new measurements of HR effectiveness are required. HR departments can no longer rely on traditional measurements of transactional activities. Indeed, most of my field data indicated that many in the profession are making this transition. Companies are using employee surveys designed to measure subjective aspects of the individual’s experience in the firm.

7. Consistent differences between Asian and U.S. managers’ impressions of HR were noted in Chapter Four. A masters thesis by Hiroaki Itakura (MIT Sloan Management of Technology SM, 1996) notes some features of Japanese human capital management:

- Long-term focus throughout the firm, including training and long-term performance management
 - Bi-annual incentive compensation (bonuses) for all employees (to motivate in short-term)
 - Minimal compensation disparity between top managers and new hires (13:1 in Japan, versus over 100:1 in U.S.)
 - Transparency in compensation systems
 - Strong preference for promotion from within
 - Consistent investment in internal education of personnel
- (Itakura 1996)

These features could contribute to explaining why Asian managers in my study (primarily Japanese) perceive HR as being of greater value, more strategic and contributing more to organizational effectiveness than do their American counterparts. Thus, these attributes of Japanese HR could serve as models for Western HR managers to consider when designing organizations and human capital management strategies.

8. Finally, I must assume that the small sample of firms I studied in this thesis are representative of many US firms. However, given the cultural differences I have uncovered in my interviews and survey questionnaire, I believe much could be gained by looking globally for effective human capital management practices.

Recommendations

Sociology and organizational studies have long provided a colorful collection of content for application by the human resources profession. Building on the organizational change work of Barnett and Carroll (1995), Jeffrey Pfeffer concluded that the field of organizational theory “could benefit from more connection between... process and content” and “the translation of knowledge into action” (Pfeffer 1997, 202). Taking this further, I submit that HR professionals, armed with the education, knowledge and practical experience in organizational behavior, can bring their expertise to bear on the entire organization in the actionable roles of advisor, designer, and integrator.

Additionally, with the tacit and expressed executive level support that currently appears in abundance, this seems to be an opportune time for HR practitioners to take the lead in delivering creative solutions and systems for the building of organizational capabilities. To my mind, there are many important roles for human capital management leaders to fill. In the words of a national retained search consultant, “HR has a broad mandate.” Thus, I present two practical recommendations.

HR as the “Holistic Integrator”

From the literature on organizational effectiveness, I distilled my own 10-point set of guiding principles of organizational design and action (see Figure 5-1). The principle of holism is a key component of this set of organizational maxims. Given the growth of the fields of organizational development and organizational design and their proper place within the HR function, I believe these principles are relevant to HR practitioners as a tool for integrated analysis and action.

Figure 5-1: Guiding Principles of Organizational Design and Action

1. Simple, clear, and aligned mission and guiding values—alignment of action and rhetoric
2. Small decentralized—performance-accountable units
3. Selecting human capital for value fit and heterogeneity, and developing and educating all organizational members (i.e. building organizational capabilities by investing in the development of all organizational members)
4. Balancing between performance incentives at individual, unit, and whole firm levels, with comparatively less weight on individual incentives
5. Designing for mutual benefit in internal and external relationships
6. Minimal hierarchy, small centralized staff, leveled status distinctions, group decision making, and rotating service leadership
7. Motivation through common objective systemic design and not motivation by control and fear (i.e. favoring Theory Y over Theory X)
8. Vertical and horizontal linkages, communications, measurements, and reporting practices
9. High degree of external environment connectivity
10. Continuous simplification and holistic integration in action on all above items

Just as I was finishing this thesis, I attended a lecture by M. Diane Burton who offered a framework for strategic human resources. One of the slides she presented, “Using Design Levers to Manage Context” (see Figure 5-2), maps well to my understanding of the literature review as well as what I learned from my interview

respondents. In this thesis, I covered the areas of measurement, compensation, rewards, recruitment, values, teams, training and development. I also included the need for HR to take a long-term perspective and engage in considerable information sharing throughout the organization. And my exploration of motivation seems to me similar to Burton's concepts of "psychological ownership" and "participation and involvement."

Figure 5-2: Strategic HR Management and Design Levers



Source: Burton 2006

Burton put forth this model noting that some of the "levers" are often discussed in the literature as general management principles (Baron and Kreps 1999). She suggested (and I agree) that strategic HR management can be defined as the active integration of all 12 elements—the holistic integrator role of the Human Resource area.

Clarity in Role and Name

The interviews revealed that much of the traditional administrative, non-strategic functions of HR have or are now being outsourced, or moved out of HR to internal administrative functions. Also, the study of both general and biotech HR practices showed that HR's primary activities are now focused more around the valued-added activities of organizational design and leadership development. However, the U.S. managers I surveyed did not generally have this impression. Nor was there a strong indication in the literature that this work was being done in the U.S. I suspect that this could be partly due to the legacy impression of HR—HR knows what they are now doing but the news has not yet been received. Or, perhaps, the time horizon required to understand the new role HR departments are playing is too broad to be visible to most organizational members.

Whatever the reason, a possible solution to this image problem could be a restructuring and renaming of HR, to better reflect the reality of their function. For example, what was the 'purchasing department' a decade ago, has today become the 'supply chain management' function. Within supply chain management, falls the largely administrative function of procurement. Analogously, firms could split HR into two different functional areas:

1. Human Capital Management (strategic and transformational)
2. Administration (traditional administrative, transactional activities)

Keeping a distinct administrative function within or connected to HR (not unlike what 'procurement' is to 'supply chain management') would allow for signaling to the

firm that there is a difference. I suspect that this is likely already in practice in the field in various forms, but it may not be clear to the employees or to senior management.

Further, there seems to be no clear delineation between human resources (HR) and human capital management (HCM), though some have suggested that HR is a distinct function, whereas HCM is an embedded or a general role played by chief executives, general managers, and line managers. In contrast, most everyone understands what a management consultant is and what consultants do, albeit the name and role is quite broad and nonspecific. Nevertheless, the general awareness and credibility of the management consulting profession is well established. Thus, a combination of long-term on-the-ground action on the part of HR practitioners, the vocal and structural support of CEOs and boards of directors, and a clear and symbolic restructuring of the HR function may be the recipe for a more recognized, value-added HR.

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Appendix A: Sloan Fellows Survey Instrument

A. My view of human capital mgt/Human Resources (HR), is from *my experience in*: (check one)

- ☐ Sales ☐ Marketing ☐ R&D ☐ Product Mgt/Dev ☐ IT ☐ Operations
☐ Executive/General Mgt. ☐ Finance ☐ Other (specify)_____

B. My perspective on HR is mostly from organizations of the size (in people): (check one)

- ☐ 10-50 ☐ 50-250 ☐ 250-1000 ☐ 1000-5000 ☐ 5000-10,000 ☐ 10,000+

C. My view of HR is from my experience in the following sector: (check one)

- ☐ Consulting ☐ Energy ☐ Financial Services/Banking ☐ Manufacturing
☐ Education ☐ Gov't ☐ IT (Software, Hardware) ☐ Private Equity
☐ Healthcare/Biomedical ☐ Other (specify)_____

D. My experience with HR has been mostly in the following region: (check one)

- ☐ China ☐ Japan ☐ Korea ☐ Taiwan ☐ Singapore
☐ India ☐ East/So. Asia/Oceania ☐ N. Asia (Russia, Kazakhstan)
☐ E. Europe ☐ W. Europe ☐ Africa ☐ Mid East ☐ Antarctica
☐ N. America ☐ S. America ☐ Global (no specific region)

For each of the following items, please circle one number.

1. In my experience, the role of HR/human capital management has proven to be of:

no value 1 2 3 4 5 6 7 *great value*

2. HR has been a key contributor to building organizational capabilities and firm success:

disagree 1 2 3 4 5 6 7 *agree*

3. HR has clout with line managers, staff, and individual contributors in the firm:

disagree 1 2 3 4 5 6 7 *agree*

4. Administrative, transactional functions of HR (benefits, recruiting) are, or have been:

outsourced 1 2 3 4 5 6 7 *retained inside firm*

5. HR is trending more strategic, encompassing roles of internal consultant, talent management, leadership development, attraction/retention of talent, compensation, organizational design:

disagree 1 2 3 4 5 6 7 *agree*

6. HR has the capability of becoming more relevant to human capital management in the future:

disagree 1 2 3 4 5 6 7 *agree*

7. HR leaders (CHROs, SVPs) have respect of CEOs, CFOs, and have full support of executive team:

disagree 1 2 3 4 5 6 7 *agree*

8. I would expect human capital management practices in Biotechnology to be relatively:

administrative 1 2 3 4 5 6 7 *strategic*

9. “HR” as a function needs a brand/name change to be effective and credible:

disagree 1 2 3 4 5 6 7 *agree*

10. Training in Systems Dynamics can help build stronger General Manager (GM) capabilities:

disagree 1 2 3 4 5 6 7 *agree*

If you have other insights about HR/human capital management , please feel free to get in touch, or send me an email with your thoughts. **Thanks so much for your time and perspective!** -Jeff Eckman

Appendix B: Sloan Fellows Survey - Raw Statistical Data

1. Value		2. Contributor		3. Clout		4. Outsourced		5. Strategic	
Mean	4.594202899	Mean	4.260869565	Mean	3.852941176	Mean	5.507246377	Mean	4.434782609
Standard Error	0.216850706	Standard Error	0.220102446	Standard Error	0.206633522	Standard Error	0.215177704	Standard Error	0.217987248
Median	5	Median	5	Median	4	Median	6	Median	5
Mode	6	Mode	5	Mode	2	Mode	6	Mode	5
Standard Deviation	1.80129725	Standard Deviation	1.828308234	Standard Deviation	1.703943678	Standard Deviation	1.787400251	Standard Deviation	1.810738076
Sample Variance	3.244671782	Sample Variance	3.342710997	Sample Variance	2.903424056	Sample Variance	3.194799659	Sample Variance	3.278772379
Kurtosis	-0.998519264	Kurtosis	-1.070429764	Kurtosis	-1.215619032	Kurtosis	1.345829089	Kurtosis	-0.791186437
Skewness	-0.406273729	Skewness	-0.205967249	Skewness	0.161750482	Skewness	-1.492100034	Skewness	-0.465503664
Range	6	Range	6	Range	6	Range	6	Range	6
Minimum	1	Minimum	1	Minimum	1	Minimum	1	Minimum	1
Maximum	7	Maximum	7	Maximum	7	Maximum	7	Maximum	7
Sum	317	Sum	294	Sum	262	Sum	380	Sum	306
Count	69	Count	69	Count	68	Count	69	Count	69
Largest(1)	7	Largest(1)	7	Largest(1)	7	Largest(1)	7	Largest(1)	7
Smallest(1)	1	Smallest(1)	1	Smallest(1)	1	Smallest(1)	1	Smallest(1)	1
Confidence Level(95.0%)	0.432718841	Confidence Level(95.0%)	0.439207588	Confidence Level(95.0%)	0.412442232	Confidence Level(95.0%)	0.429380418	Confidence Level(95.0%)	0.434986775

6. Capability		7. Support		8. Admin		9. Brand		10. GM	
Mean	5.550724638	Mean	4.391304348	Mean	4.76119403	Mean	4.536231884	Mean	5.104477612
Standard Error	0.159303995	Standard Error	0.201462461	Standard Error	0.215929985	Standard Error	0.243919849	Standard Error	0.209600348
Median	6	Median	5	Median	5	Median	5	Median	6
Mode	6	Mode	6	Mode	6	Mode	6	Mode	6
Standard Deviation	1.32327837	Standard Deviation	1.673472889	Standard Deviation	1.767463104	Standard Deviation	2.026150437	Standard Deviation	1.71565279
Sample Variance	1.751065644	Sample Variance	2.800511509	Sample Variance	3.123925825	Sample Variance	4.105285592	Sample Variance	2.943464496
Kurtosis	0.108246705	Kurtosis	-0.955171531	Kurtosis	-0.51138363	Kurtosis	-1.076935985	Kurtosis	0.248017127
Skewness	-0.838265771	Skewness	-0.24135744	Skewness	-0.558294438	Skewness	-0.507482523	Skewness	-1.001911879
Range	5	Range	6	Range	6	Range	6	Range	6
Minimum	2	Minimum	1	Minimum	1	Minimum	1	Minimum	1
Maximum	7	Maximum	7	Maximum	7	Maximum	7	Maximum	7
Sum	383	Sum	303	Sum	319	Sum	313	Sum	342
Count	69	Count	69	Count	67	Count	69	Count	67
Largest(1)	7	Largest(1)	7	Largest(1)	7	Largest(1)	7	Largest(1)	7
Smallest(1)	2	Smallest(1)	1	Smallest(1)	1	Smallest(1)	1	Smallest(1)	1
Confidence Level(95.0%)	0.31788617	Confidence Level(95.0%)	0.402012078	Confidence Level(95.0%)	0.431118121	Confidence Level(95.0%)	0.486734474	Confidence Level(95.0%)	0.418480592

Size	# of surveys	Value	Contributo	Clout	Outsource	Strategic	Capability	Support	Admin	Brand	GM
30	8	3.75	3.5	2.428571	5	3.5	5.5	3.375	4.125	5.5	5.5
150	13	5.153846	5.230769	4.461538	6	5.153846	5.846154	5.076923	5.615385	4.307692	5.538462
625	13	4.230769	3.615385	4.230769	5.692308	4.384615	5.769231	4	4.461538	4.615385	5.090909
3000	11	4.545455	4.363636	3.818182	5.636364	4.363636	5.636364	4.363636	4.272727	3.909091	5.545455
7500	5	6.4	6	5.4	4	5.6	6	4.8	6.25	3.6	3.2
10000+	17	4.294118	3.647059	3.176471	5.705882	3.941176	5.058824	4.352941	4.5	4.705882	4.882353
Multi	2	5	5.5	4.5	4.5	5.5	5	6	5.5	6	5

Sector	Num Survey	Value	Contributo	Clout	Outsource	Strategic	Capability	Support	Admin	Brand	GM
Consulting	5	4	3.8	2.5	5	4.2	5.4	4.2	4.4	4.2	4.4
Education	2	4	4	3.5	6.5	5	5	3.5	4	5	5.5
Energy	8	4.75	4	4	5.5	4.875	6.125	4.5	4.857143	4.5	5.75
Engineers	1	4	5	3	6	5	4	6	5	6	4
Environment	1	6	4	4	6	4	7	5	3	1	6
Financial	8	5	4.75	4.625	5.125	5.5	5.625	4.5	4.5	2.625	4.875
General Trading	1	6	4	6	6	6	6	5	6	3	6
Gov't	5	6.2	6.4	4.8	6.2	5.8	6.2	4.6	5.75	5.6	4.6
Health	1	2	2	2	6	2	7	3	1	7	7
IT	19	3.947368	3.894737	3.578947	5.315789	3.526316	4.842105	4	4.894737	5	4.666667
Legal	1	6	5	5	4	1	6	5	1	7	5
Manufacturing	8	4.25	4	3.875	6.25	5	5.875	5.125	5.5	3.375	5.25
Multi-sector	6	5.666667	5.333333	4.666667	5.5	5.166667	6	4.5	5.333333	5.5	5.6
Private	1	4	4	2	6	5	6	3	4	6	5
Real Estate	1	2	2	2	7	1	5	3	6	5	7
Start Up	1	7	1	1	1	1	5	6	1	7	7
	69										

Region	Num Survey	Value	Contributo	Clout	Outsource	Strategic	Capability	Support	Admin	Brand	GM
W. Europe	3	2	3	1.666667	4.666667	3	5	2.333333	6.333333	2.333333	7
Taiwan	2	4.5	4	4.5	6	3.5	4.5	3.5	4	3.5	5.5
Singapore	3	6	5.25	4.25	5.75	5.25	5.75	5	4.666667	4.75	4
S. America	2	4.5	4	5	6.5	6.5	6.5	5.5	6	1	6
N. Asia	2	5.5	6	6	5.5	6.5	7	6	7	5.5	7
N. America	26	4.192308	3.653846	2.72	5.5	3.730769	5.576923	4.038462	4.076923	5.269231	5.376923
Korea	5	6.4	5.8	5.4	6.6	6.2	6.4	5.8	6.2	5.6	6
Japan	7	5.285714	5	5.142857	4.714286	5	5.142857	5	4.857143	2.428571	3.428571
Global	14	4.142857	4.285714	4.428571	5.285714	4.5	5.357143	4.5	4.769231	4.928571	4.666667
China	4	5.25	4.5	4.25	5.5	4.25	5.25	3.75	4.75	4.5	5
Africa	1	6	5	5	7	6	6	5	6	4	6

Experience	# of surveys	Size	Value	Contributo	Clout	Outsource	Strategic	Capability	Support	Admin	Brand	GM
Executive	22	3370.714	4.954545	4.772727	4.181818	5.272727	4.318182	5.590909	4.727273	4.952381	4.818182	4.863636
Operations	7	6235.714	4.428571	3.714286	3.571429	6.428571	4.571429	5.285714	5	3.666667	4.857143	5.428571
R&D	7	3422.143	5	4	3.285714	6	3.857143	5.571429	4	4.857143	4.428571	5.428571
Multiple	7	4590	5.142857	5.142857	4.333333	5.428571	5.142857	6.285714	4.428571	4.714286	5.714286	5.833333
Finance	6	3175	4.166667	3.666667	4	5.5	4.5	4.833333	4	4.833333	3	4.5
Product	6	5550	4.5	4.5	4.333333	4.833333	5.5	5.666667	4.166667	4.666667	2.833333	6.5
Sales	4	3443.75	4.75	5	4.5	6.25	4.75	5.5	5.5	5	5.75	5
Marketing	4	3413.75	3	4	2.75	6.5	3	4.75	2.5	6.75	5	2.75
Start up	2	30	5.5	2.5	1.5	3.5	3	5.5	4.5	2.5	6.5	6
Academic Research	1	3000	5	3	1	6	5	7	4	4	3	5
IT	1	625	1	2	6	4	4	6	1	1	1	1
Legal	1	625	3	1	4	6	6	6	5	7	1	5
Blank	1	30	3	3	3	3	4	6	5	5	6	5

Regroup-Experience	# of Surveys	Value	Contributo	Clout	Outsource	Strategic	Capability	Support	Admin	Brand	GM
Start up	2	5.5	2.5	1.5	3.5	3	5.5	4.5	2.5	6.5	6
Sales/mkt	8	3.875	4.5	3.625	6.375	3.875	5.125	4	5.875	5.375	3.875
Mult	5	5	4.8	3.5	6	4.8	6.4	3.8	4.2	5.6	5.75
IT/O	8	4	3.5	3.875	6.125	4.5	5.375	4.5	3.285714	4.375	5.428571
E.F.L	29	4.724138	4.413793	4.137931	5.344828	4.413793	5.448276	4.586207	5	4.310345	4.793103
A/R&D/P.M.	16	4.875	4.375	3.875	5.3125	4.8125	5.75	4.3125	4.875	3.9375	5.875

Regroup by Sector	# of Surveys	Value	Contributo	Clout	Outsource	Strategic	Capability	Support	Admin	Brand	GM
Other Sector	14	5.071429	4.357143	3.538462	4.928571	4.214286	5.714286	4.428571	4.285714	5.285714	5.153846
Manufacturing	8	4.25	4	3.875	6.25	5	5.875	5.125	5.5	3.375	5.25
IT&Engineer	20	3.95	3.95	3.55	5.35	3.6	4.8	4.1	4.9	5.05	4.631579
GEHE	9	5.222222	5.111111	4.111111	6.222222	5	6.111111	4.222222	4.375	5.111111	5.222222
Financial and Real Estate	10	4.8	4.4	4.5	5.4	5.1	5.6	4.4	4.8	2.9	5.2
Energy	8	4.75	4	4	5.5	4.875	6.125	4.5	4.857143	4.5	5.75

Region	# of Surveys	Value	Contributo	Clout	Outsource	Strategic	Capability	Support	Admin	Brand	GM
America	28	4.214286	3.678571	2.888889	5.571429	3.928571	5.642857	4.142857	4.214286	4.964286	5.357143
Asia	27	5.518519	5.074074	5	5.592593	5.222222	5.703704	4.851852	5.192308	4.111111	4.962963
Europe	3	2	3	1.666667	4.666667	3	5	2.333333	6.333333	2.333333	7
Global	10	3.8	4	3.9	5.2	4	5	4.4	4.555556	5.2	3.875

Regroup by Size	# of Surveys	Value	Contributo	Clout	Outsource	Strategic	Capability	Support	Admin	Brand	GM
2500	21	4.619048	4.571429	3.75	5.619048	4.52381	5.714286	4.428571	5.047619	4.761905	5.52381
5000	24	4.375	3.958333	4.041667	5.666667	4.375	5.708333	4.166667	4.375	4.291667	5.318182
10000	22	4.772727	4.181818	3.681818	5.318182	4.318182	5.272727	4.454545	4.85	4.454545	4.5
multi	2	5	5.5	4.5	4.5	5.5	5	6	5.5	6	5

Appendix C: The Johnson & Johnson Credo (Johnson 1949, —173-174)

Our Credo*

We believe that our first responsibility is to our customers:

Our products must always be good. We must strive to make them better at lower costs. Our orders must be promptly and accurately filled. Our dealers must make a fair profit.

Our second responsibility is to those who work with us — the men and women in our factories and offices:

They must have a sense of security in their jobs. Wages must be fair and adequate, management just, hours short, and working conditions clean and orderly. Workers should have an organized system for suggestions and complaints. Foremen and department heads must be qualified and fair minded. There must be opportunity for advancement — for those qualified and each person must be considered an individual standing on his own dignity and merit.

Our third responsibility is to our management:

Our executives must be persons of talent, education, experience and ability. They must be persons of common sense and full understanding.

Our fourth responsibility is to the communities in which we live:

We must be a good citizen — support good works and charity, and bear our fair share of taxes. We must maintain in good order the property we are privileged to use. We must participate in promotion of civic improvement, health, education and good government, and acquaint the community with our activities.

Our fifth and last responsibility is to our stockholders:

Business must make a sound profit. Reserves must be created, research must be carried on, adventurous programs developed, and mistakes made and paid for. Bad times must be provided for, high taxes paid, new machines purchased, new factories built, new products launched, and new sales plans developed. We must experiment with new ideas. When these things have been done the stockholder should receive a fair return.

We are determined with the help of god's grace, to fulfill these obligations to the best of our ability.

* Some language in this 1949 version of the J&J Credo has been since updated. For example, “workers” was later replaced with “employees,” and “foremen” later replaced with “supervisors.” Also, “hours short” was later replaced with “hours reasonable.” The Credo has seen numerous revisions, the latest being an update in 1987. See http://www.jnj.com/our_company/our_credo_history/revisions/index.htm